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DEMENTIA PRÆCOX.[1]

By M. H. DOWNEY, D.S.O., M.B., B.S.,
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IN selecting a subject which might prove to be of some interest to the members of this Branch, I have decided upon *dementia præcox,* a disease frequently met with outside as well as inside mental hospitals and one which because of its complexity and varying types often presents real difficulty in its diagnosis and prognosis. Also, advantage of the present opportunity will be taken to discuss shortly the management of patients with mental disorder met with in general practice, with particular reference to those suffering from doubtful and early conditions.

DEMENTIA PRÆCOX.

Ætiology.

Thirty years ago Kraepelin first described *dementia præcox* as a distinct disease. *Præcox* means premature. The late Sir Thomas Clouston, of Edinburgh, regarded the dementia which sometimes followed his cases of "adolescent insanity," as secondary or terminal dementia. Kraepelin divided adolescent insanity into favourable and unfavourable, the former he called manic-depressive insanity and the latter *dementia præcox.* Human beings are either extroverts or introverts. The extrovert is not introspective, but allows his energies to flow out freely and to make contact with the world and with his fellow men. The introvert is introspective and he lives largely within himself. The *dementia præcox* patient belongs to the introvert group, he lives in a world of phantasy from which he refuses to emerge.

The history and course of the disease seem to indicate that there is some inherent lack of vitality in the fertilized ovum and thus the patient gets away badly in the race. Defective heredity is commonly found and further evidence of a bad start is seen in the commonly observed stigmata of degeneration. As the result of defective development there comes about a disintegration of the personality and a failure of adaptation to environment. This failure begins to show itself between the ages of fifteen and thirty years.

With inherent lack of development as a background, it can be understood how certain exciting causes or stresses may initiate the disease. But these stresses are always difficult to locate in patients with *dementia præcox* and it must be confessed that in the large majority it is impossible to assign a cause. Nevertheless a stress can be found occasionally, such as over-study, physical disease, alcoholism or perhaps more frequently a psychological factor such as a love affair, a difficulty over some abstract concept such as religion, or a set of circumstances in the patient's environment which through duty or filial affection leads him consciously in one direction and unconsciously in another, thus forming a problem or difficulty that he finds impossible to overcome. As an introvert he abandons the problem and retires into a dream existence which enables him in a grotesque way to adapt himself to reality.

Physical Signs.

The general health is usually below par. This is largely the result of inactivity, poor appetite and assimilation, constipation and sometimes definite gastro-intestinal toxæmia. The tendon reflexes are usually exaggerated. In the stuperose patients the extremities are cold and œdematous. In most there are stigmata of degeneration as shown by erect hair above the forehead, narrow, high, arched or very flat palate and various abnormalities of the ears, eyes, fingers or other parts of the body. A peculiar transverse wrinkling of the forehead is sometimes seen.

Symptoms.

The history generally shows that the patient was a moody, shy, seclusive child who had some difficulty in his school days, not only with his lessons, but with his parents, his companions and with his social environment generally. Occasionally, on the other hand, he is found to have been keen to acquire knowledge and well able to assimilate it. Between the ages of fifteen and thirty an individual is more idealistic and emotional, more given to "building castles" than he is apt to be later on. It is perhaps for this reason that failure of adaptation in these young people tends to a dissociation of the personality. Later in life a failure is apt to be more compensatory in type and less in the direction of dissociation. Memory perception and orientation are clear, but interest and initiative are lost and there is little or no emotional response. Development of the disorder is slow and almost imperceptible. The patient is noticed to have become strange, unusual and in some way different. He has become more shy, more seclusive and has lost interest in his surroundings. He has become lazy and apathetic, dislikes work and will remain in bed all day if permitted. Conduct becomes childish. He developes hallucinations, those of hearing being especially common. Where previously the young man had normal or even excessive regard to his personal appearance, he is noticed to have become untidy and slovenly. He begins to exhibit strange habits and mannerisms. As the disease progresses, peculiar and characteristic disorders of conduct arise.

Types.

Kraepelin described at least a dozen types, but in this and in most mental hospitals all patients are grouped into three types, the hebephrenic, the catatonic and the paranoid. These are not always sharply delineated and it is common to see a certain mixture of types, also to see variation of type in a given case.

[1] Read at a meeting of the South Australian Branch of the British Medical Association on March 29, 1928.

The Hebephrenic Type.

The patient is shy and seclusive, he loses interest in his friends and in his surroundings, he developes hallucinations and mannerisms and his conduct becomes childish. At times he is restless, at others depressed and sooner or later he developes delusions of a grandiose or religious type. He is impulsive and his habits become degraded, though there are exceptions to this rule. He ignores his companions and may become hostile, rude and sarcastic. At times he will retire into himself and become completely self-absorbed. He is often in a happy, childish frame of mind and will giggle or laugh while running away from anyone wishing to interview him. He is frequently egotistical with an exaggerated sense of his capabilities. Throughout, his judgement and reasoning power are definitely defective and his conduct is childish.

The Catatonic Type.

This patient is quiet and depressed, with hallucinations and delusions. He rarely speaks or is mute and negativistic. This depressed condition sometimes passes into one of definite restlessness and excitement and these two conditions may alternate, as shown in the following case.

R.K., admitted on August 8, 1918, aged twenty-seven years, single, was a clerk and ex-soldier. The duration of his attack was twelve months. On admission he was restless, violent, sleepless and faulty in habits. He was incoherent in speech, with a rapid flow of ideas. Attention was definitely impaired. Three months later he became quiet and apathetic.

He had hallucinations of hearing. He would stand or sit in one fixed attitude for hours, staring and dribbling saliva. He was impulsive. *Flexibilitas cerea,* echopraxia and echolalia were pronounced. These conditions of excitement and stupor have alternated every few months since his admission. He is now showing definite signs of dementia.

While mannerisms of a peculiar kind are observed in all types of *dementia præcox,* it is in the catatonic type particularly that we see the resistive and imitative conduct or the gyrations and antics of a cataleptic or catatonic nature.

Cataleptic States.—Cataleptic states arise as the result of external stimuli and may be enumerated as follows: (i) *Flexibilitas cerea,* in which the head, trunk or limbs will retain any position imposed upon them for minutes or even hours. At the beginning of a demonstration to students I moulded a patient's limbs into a grotesque position and then turned my attention to other matters. At the end of the demonstration which lasted for two hours, I turned round to find the patient in the position and attitude in which I had placed him. (ii) Negativism in which he will oppose your wishes and do exactly the opposite. Great trouble is experienced with these patients in endeavouring to dress and undress them and in fact to carry out any of the numerous requirements of care and management. (iii) Echopraxia, in which the patient will imitate movements performed in front of him. (iv) Echolalia, in which he will repeat anything that is said to him.

Catatonic States.—Catatonic states are self-imposed and are independent of external stimuli. They vary in range from the fixed attitudes in which the patient will sit or stand for hours, mute and staring, up to the extreme trance-like condition occasionally seen in catatonic stupor and illustrated in the following case.

R.M., female, aged thirty-one years, married, was admitted on March 22, 1926. The duration of her attack was twelve months. It was stated on the admitting certificate that she became silent and listless after the birth of her last baby fifteen months previously, that she sat in one position and would not move, that she refused food and would not speak.

On admission she was fairly nourished, tongue was furred, breath sounds were weak, reflexes normal. She lay in bed in a stiff attitude with eyes closed. She was mute and negativistic, with pronounced *flexibilitas cerea.* She had to be fed. In April, 1926 some improvement was noticed, she was eating better and the breath sounds were clear. In November, 1926, she had become very emaciated, her temperature was irregular, she was mute and lay very still.

Her condition remained unchanged till June 27, 1927, when she died of bronchopneumonia.

Throughout her illness the patient rarely moved and, when turned over in bed, her body remained stiff and board-like. The eyelids rarely moved, even if a hand were waved in front of them.

Catalepsy and catatonia were always prominent. She had to be fed. She was always so still and death-like that another patient one day said "remove that woman she has been dead for some time!"

A fact which reflects credit on the nurses in charge of the patient, is that this immobile, vegetative, emaciated patient lay in bed for fifteen months without contracting a bed sore.

Other catatonic manifestations are: (i) Copralalia, an impulsive outburst of abusive and obscene language without any apparent provocation. This is well illustrated by two of our patients. (ii) Verbigeration, in which the patient will repeat a phrase over and over again with tireless persistence. (iii) Stereotypy in which he will repeat for a considerable time some simple or complex movement of the head, trunk or limbs, while sitting, standing or walking. (iv) Mannerisms and antics of an apparently meaningless kind are common. These vary from stilled modes of expression in speech and writing to all manner of muscular actions such as grimacing, twisting and twirling the fingers and arms, standing on one leg and bending sideways, standing on the head, turning head over heels *et cetera.* (v) Lastly, there are two peculiar manifestations known as pseudographia and pseudolalia. In pseudographia the patient will write lines of strokes, dots, and curves in the form of a letter and will request that it be posted. In pseudolalia the patient, perhaps in explanation of his pseudographic writing, will utter a series of sounds out of which no sense can be made.

The Paranoid Type.

The paranoid type usually occurs at a later age than either of the foregoing. It is characterized by hallucinations and delusions of a persecutory nature, associated with mannerisms and other signs of *dementia præcox.* An exalted strain invariably becomes added and the delusions often show great confusion of thought and absurdity. One patient, a female, stated that a man took away her internal organs and drew her capacity by making things so

comfortable for himself that she was pushed out of her pathway in life.

Diagnosis.

In a suspected case of *dementia præcox* careful inquiry should be made into the family and personal history, the behaviour and the mode of onset.

A definite exciting cause associated with an acute onset, even in a young person may indicate that we are dealing with mania, melancholia, confusional psychosis or benign stupor, while a slow, almost imperceptible onset without definite assignable cause, a gradual loss of energy and interest, the early development of hallucinations, especially if associated with catatonic or cataleptic manifestations and mannerisms, lead the diagnosis to *dementia præcox*.

In ordinary anergic stupor there are none of the characteristic manifestations or mannerisms, the patient is apathetic and unresistive and mentation is in abeyance. In catatonic stupor there are attitudes and other motor manifestations, while mentation is not in abeyance. In other words the *dementia præcox* patient's receptive faculties are intact and he is quite aware of what is being said or done in his immediate environment. Also he will laugh or smile at anything which tickles his sense of humour, and, if he deems himself unobserved, will steal a quick glance at a person who has just left him, but who has been vainly endeavouring to attract his attention.

Mania and melancholia are invariably acute in onset and the affective tone of exhilaration or depression dominates the clinical picture. Hallucinations are generally absent, but, if present, they never form a prominent feature. There are no characteristic attitudes or mannerisms and the history is quite different.

Confusional psychosis is marked by loss or great impairment of memory, perception and orientation. The onset is acute and the disease invariably arises from shock, mental or physical over-exertion, toxic or exhausting disease. In *dementia præcox* memory, perception and orientation are intact. Patients with mixed and atypical forms often present difficulty in diagnosis for a time. They must be observed for a few weeks and with the subsidence or diminution of the manic-depressive signs the presence or absence of hallucinations, attitudes or mannerisms will indicate the nature of the condition.

Course and Prognosis.

With patients who show the typical clinical picture of *dementia præcox*, the prognosis is unfavourable. Where the onset has been gradual over a long period, the prognosis is invariably bad. Patients exhibiting great seclusiveness, loss of interest, loss of emotional reaction and laziness, drift into dementia. On the other hand we see many young people whose illness can be ascribed to some particular stress, where the onset is acute, but where, nevertheless, the hallucinations, the cataleptic and the catatonic signs induce us to regard the condition as *dementia præcox*. The condition of such patients may clear up perfectly and the probable explanation is that the temporary failure of adaptation has shown itself as a "*dementia præcox* type of reaction."

Even patients with undoubted *dementia præcox* sometimes recover, while others clear up periodically, to relapse soon afterwards. Sometimes we see patients whose dementia is of a mixed nature, whose symptoms of *dementia præcox* are in association with symptoms of mania, melancholia or confusional psychosis.

In the following case symptoms of *dementia præcox* were mixed with those of confusional psychosis:

C.D., a male, aged eighteen years, single, was admitted on September 26, 1924. The duration of the attack was five months and the onset was acute. It was stated on the admitting certificate that he laughed without any apparent cause, that he would not answer questions and that he took no interest in his affairs. His parents stated that he was very restless and destructive and had changed in demeanour.

On admission he was moderately nourished, the tongue was furred and tooth-indented, the reflexes were normal, the fingers and toes were abnormally long and the hands and feet cyanosed. His conduct was degraded, he had to be fed, he giggled mainly when spoken to and he exhibited catatonic attitudes and *flexibilitas cerea*. Memory, perception and orientation were impaired. He gave a female name, said his age was forty-seven years and did not know when he left home or where he was. In November he was given thyreoid gland extract and hyperthyreoidism was induced.

On February 5, 1925, he was granted trial leave. He had become rational and well conducted. Six months later his mother wrote me to say that the patient was quite normal. There has been no recurrence.

Experience shows that prognosis can be guided by purity of type. It is probable that a number of factors enter into the causation of any form of insanity and that these factors vary greatly in their nature. This may account for the mixed forms and in them the prognosis will depend not only on the history and the mode of onset, but also on the predominance on the one hand of manic-depressive symptoms or on the other of typical *dementia præcox* symptoms.

Pathology.

Mott examined the brains and endocrine organs of a large number of patients of both sexes who died of *dementia præcox*. He found degenerative changes in the neurones, ductless glands and generative organs.

Jung, of Zurich, insists upon repressions, conflicts and complexes, while Ford Robertson, of Edinburgh, believes that a large number of patients have intestinal stasis with putrefactive intoxication.

Treatment.

Endocrine treatment is invariably tried. Notwithstanding Mott's finding of regressive changes in the generative glands, treatment by genital gland extract has not yielded satisfactory results.

Gastro-intestinal disorder, as shown sometimes by loss of appetite, indigestion, furred tongue, bad breath and constipation, is treated by preliminary

rest in bed, dieting and intestinal antiseptics, such as calomel in small doses. Institutional treatment with its discipline, regularity, training in good habits and elimination of bad, its suggestive and persuasive forms of therapy, its routine attention to the personal hygiene and general health and above all its system of organized recreation and occupation, provides the best chance for the *dementia præcox* patient.

Care and Management of Patients with Mental Disorder.

In approaching the subject of the care and management of patients with mental disorder met with in general practice, the first question to arise is "what is to be done with the patient?" It will be found, I think, in the large majority of cases that the wisest practice is to remove the patient from the environment where the faulty adjustment has occurred, to a fresh environment. Thus, according to the degree of severity of symptoms, he may be sent away to the care of relatives or friends, to a suitable private hospital or sanitorium or to a public mental institution. I do not advocate that all patients whose condition is of a mild or moderate nature, should be sent as a matter of course to a public mental institution, but this should be done in the interests of the patient, if a suitable private sanitorium does not exist.

In South Australia the *Mental Defectives Act* makes no provision for private licensed houses, though personally I can see no objection to their establishment, if they are placed under proper supervision. Provision is made for the reception and observation under a form of certification of patients whose mental condition is doubtful, at the Enfield Receiving House. The Act also provides for the establishment of receiving wards in general hospitals, though this has not been put into force. In either case, whether the patient goes to the Receiving House or receiving ward, a form of certification must be used, except that for admission to a receiving ward an alternative procedure is provided for in the form of simple recommendation by a medical practitioner. Provision is also made for the admission of voluntary boarders to an institution, but, so far as receiving houses and mental hospitals are concerned, I am afraid its application and usefulness would prove to be rather limited. It is admitted that the methods provided by the Act deal adequately with the majority of patients, not without, it must be confessed, a varying amount of opposition in many instances from the relatives of the patient and from the patient himself. This opposition is frequently based on ignorance and prejudice, sometimes on purely sentimental grounds and sometimes on a fear of the so-called stigma of certification. Thus there remains a considerable class for whom it is difficult to provide. Perhaps the difficulty would be overcome by the establishment of a psychiatric clinic in relation either to a general hospital or to an institution such as Broughton Hall in New South Wales, where patients with early nervous and mental disorder can be received and treated without preliminary certification. Even if this step were deemed desirable, the establishment and staffing of such an institution would entail the expenditure of much public money—a horrible thought, especially in these times of financial stringency!

So in my opinion the only alternative in the way of dealing with those who do not care to avail themselves of existing facilities, is a provision for the establishment of private licensed houses under adequate supervision.

FACIAL PARALYSIS, PALATAL REPAIR AND SOME OTHER PLASTIC OPERATIONS.[1]

By Percival Pickerill, C.B.E., M.D., M.S.,
Sydney.

Facial Paralysis.

It is not my intention to describe in detail the various forms of treatment which have been described from time to time for the relief of either Bell's palsy or the traumatic and more permanent form, but to refer to more recent work and to describe methods which I have found to be useful.

Bell's Palsy.

With regard to Bell's palsy, the only point I desire to make, is the importance of using a retractor in the angle of the mouth as soon as possible in order to avoid undue stretching of the paralysed muscles. The advantage of such retraction is, of course, well known, but I think too often its employment is delayed, dependency being placed on massage and electricity, whereas of the two I think retraction is more useful in cutting short the period of paralysis. There may be a little difficulty about the use of a retractor which will not cause either soreness at the angle of the mouth or dribbling of saliva and fluid food. For immediate use a piece of wire doubled and bent into shape and covered lightly with cotton wool soaked in paraffin or vaseline will do (the wire may be covered with thin rubber tubing, but this is more likely to cause soreness at the angle of the mouth). More elaborate mouth hooks made of metal and rounded so as not to cut the mucous membrane may be used, but are very likely to cause continuous dribbling.

If the paralysis does not soon show signs of recovery, any of these devices becomes more or less intolerable to the patient. Under such conditions I have employed a small operation which seems to meet the situation. Under local anæsthesia an elliptical piece of mucous membrane is excised from the highest point of the buccal sulcus on the paralysed side. The lip is drawn upwards and backwards and sutured in this position. The slight pain and tenderness following serves also to remind the patient not to contract the muscles on the sound side more than necessary. External strapping on the paralysed side may be used in addition. There is no fear of any permanent lifting of the angle of the mouth from this operation, for the scar stretches

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on April 12, 1928.

and the angle drops in a month or two. Otherwise the method might be of use from a cosmetic point of view in cases of traumatic facial paralysis.

Traumatic Facial Paralysis.

When paralysis has persisted for some months or longer and when reaction of degeneration is definite, operation offers the only mode of relief. The usual one is that of nerve grafting. The nerves which have been used for grafting into the distal portion of the facial are the spinal accessory, the hypoglossal (*descendens noni*), the glosso-pharyngeal and the lingual. None of these nerves would appear to be physiologically correct. The ideal nerve to use, were it anatomically possible, would be the motor nerve which shares with the seventh the innervation of the muscles of the face, that is, the motor branch of the fifth. The first operation for nerve grafting for facial paralysis was done in 1895, the spinal accessory nerve being used. This, however, was found to produce partial paralysis of the sterno-mastoid and trapezius muscles, despite the direct cervical supply. The hypoglossal is probably more commonly used now, but this also has the disadvantage if an end to end anastomosis is done (which seems to be more dependable) that paralysis and atrophy of half of the tongue result and there may be involuntary movements of the face during mastication. Personally, I have never seen more than slight control of the angle of the mouth follow this operation.

Sir Charles Ballance as the result of his experiments on baboons comes definitely to the conclusion that glosso-pharyngeal-facial end to end anastomosis is the most suitable operation. In baboons he obtained response (slight) to weak faradic currents in the facial muscles on the paralysed side after a few months. He records one case in which he had done the operation in a woman for a post-mastoid condition of sixteen years' standing. After four months there were "slight flickers of response" to weak faradic currents in the *orbiculares occuli* and *oris*. There was also voluntary movement in the *corrugator supercilii*. It is doubtful whether this operation will be generally adopted on account of its difficulty, for, as Sir Charles Ballance says, the glosso-pharyngeal nerve is small and inaccessible and after having endeavoured myself to dissect out this nerve in small animals (dogs and rabbits) and having failed and having with difficulty succeeded in a sheep, I can only still more admire Sir Charles Ballance's skill. The operation was first suggested by Sir E. Sharpey Schafer and is admittedly an empirical one, since Ballance divides the nerve distal to the point at which the motor branches leave the trunk, so it would seem that sensory fibres only are anastomozed to the facial nerve.

In place of the operations of nerve anastomosis I have found that muscle grafting gives more certain and quicker results. From a cosmetic point of view it is probably better also, but its chief and most important advantage is that it gives voluntary control in closing the eye and obliterates almost at once any accompanying ectropion of the lower lid. The unsightly flaccid and expressionless appearance of the paralysed side is also overcome to a surprising extent by the retraction of the angle of the mouth by the masseter muscle. There is, however, sometimes a tendency to involuntary closure of the eye whilst the patient is eating hard substances and there is, of course, no direct control of the muscles of expression, though this can be partly acquired by the patient. The muscles utilized are the temporal and masseter, fasciculi of these muscles being grafted respectively into the *orbicularis occuli* and *orbicularis oris*. Thus indirectly the motor branch of the fifth nerve is utilized to replace the lost seventh. The method of procedure is as follows: Through a long incision as much within the hair line as possible, a strip of temporal muscle long enough to reach to the inner canthus of the eye is separated off and raised. This is then through a subcutaneous tunnel inserted under the lower lid and attached through a small incision at the inner angle of the orbit. Two small incisions are then made, one along the lower border of the jaw and the other along the naso-labial fold. A strip of masseter muscle is dissected up through the first incision and again by subcutaneous tunnelling it is swung across to be inserted into the *orbicularis oris* at the upper angle of the mouth. Care has to be taken that the nerve supply of these muscle grafts is not interfered with, nor the muscle fibres damaged in any way. The grafts are not immediately functional, but take from six to eight weeks for voluntary control to be established. Figures I and II show a patient with traumatic facial paralysis treated in the above manner.

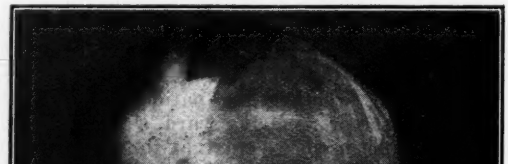

FIGURE I.
Showing Patient with Traumatic Facial Paralysis Before Operation.

FIGURE II.
Showing Patient with Traumatic Facial Paralysis After Operation by Muscle Grafting.

PALATAL REPAIR.

Under the heading of palatal repair I propose to discuss first some of the essential points in cleft palate repair and secondly to describe an eminently satisfactory method of dealing with traumatic losses in this situation. Before proceeding to do so, however, I should like to say a word about causation of cleft palate. Many theories have been advanced, but the only thing that is at all certain is the familial character of the defect, for it certainly does appear to increase both in extent and numerically in succeeding generations. This introduces the eugenic problems as to whether the surgeon is justified in making such persons marriageable or alternatively whether such patients should be advised not to marry. Maternal impressions, toxæmia or shock to be causative must, of course, occur before the end of the ninth week, but because a woman suffers such shock during the first two months of pregnancy, it is hardly justifiable to suggest that the uterus should be emptied on the chance that a cleft palate baby might otherwise be born. There is another possible factor, however, to which attention has not been directed, namely the position of the tongue in young embryos. In several sections of early embryos which I have cut, the tongue is obviously raised, wedging apart the two palatal processes, the ends of which are tucked downwards beside the tongue. It is difficult to see how such embryos, had they lived, could have escaped developing into cleft palate patients (see Figure III).

Cleft Palate.

I do not propose to enumerate all the various methods which have been described for dealing with cleft palate. The mere fact that so many methods have been devised would tend to indicate that none of them is perfect or universally satisfactory and this is perfectly true; but the fault lies not so much with the method as with the choice of method for any particular patient. I do not think that the very considerable variations in the dimensions of cleft palates are sufficiently recognized. A method of operating which might be quite suitable for one patient, is totally unsuited to another. The dimensions which show such variations are: (i) the transverse measurement of the upper jaw across the alveolar processes, (ii) the antero-posterior measurement of the pharynx and (iii) the width of the cleft itself.

The Transverse Measurement.

If the transverse measurement is so great that the lower jaw can be thrust up inside the upper jaw, it is an indication for a modified Brophy operation. I know that there still exists a prejudice against this operation and I agree that in its original form it is unnecessarily severe and mutilating, but, limited to the anterior part of the jaw, it is, I believe, good and brings about a result which can be obtained in no other way. I used to join with those who condemned this operation, but, having seen some of Brophy's work, I determined to adopt the method in selected cases and have now so used it for many years with no regrets and with considerable benefit to the patients. It can only

FIGURE III.
Transverse Section of Head of Embryo, Showing Palatal Processes Tucked Downwards Beside the Tongue.

be done, of course, in quite young babies; at or after three months it becomes difficult or impossible. It is true that the transverse wires do sometimes damage the crowns of the developing deciduous molars, but this is a small price to pay for the advantages gained, namely a properly shaped and dimensioned arch for the upper jaw and a much narrower cleft to close subsequently.

The Antero-posterior Measurement of the Pharynx.

I do not think that variations in the antero-posterior measurement of the pharynx are appreciated as much as they might be, yet merely on inspection and more so if measurements are taken, it is obvious that considerable differences exist. In some cases the space to be filled in here is quite short, in others it may be twice as long. I say filled in here, because this, if we stop to reflect, is the most important part of the cleft to be closed or at least the soft palate, when formed, must be so long and flexible that it can be approximated closely to the posterior pharyngeal wall, otherwise there will be little benefit to the patient from a speech point of view. If the pharynx is short antero-posteriorly, the ordinary Langenbeck operation will give quite a good result, provided always that the width of the cleft is not too great. But if this measurement be long, then in drawing the two sides of the soft palate across to be sutured in the mid-line, the tissues will be stretched laterally at the expense of the antero-posterior direction, resulting in the soft palate being insufficiently long to reach the posterior wall of the pharynx. Precisely the same thing happens if the width of the cleft is great in proportion to the tissue available to fill it in; either a short or a rigid soft palate results and in either case it is not functional. In effect what happens is that a median cleft, running sagitally, is converted into a posterior cleft running coronally—the cleft is merely transposed from one position to another.

Under the condition just discussed it is obvious that what is required is more tissue. Lane's flap operation supplies this excellently at the time, but it leaves a large raw area to become infected and cicatrize. In order to obviate these disadvantages I have since the war been adopting the method of skin grafting the under surfaces of such flaps prior to placing them in position across the cleft. A flap, consisting of the muco-periosteum of the hard palate, the mucous membrane and submucous tissue of the soft palate, is raised and a thin pewter plate is cut to fit the base. A Thiersch graft is then wrapped round the pewter and the whole placed in position, the flap being replaced and sutured. In ten days or a fortnight the flap may be raised again when the whole of the previous raw surfaces will be seen to be covered by a glistening white skin graft. The cleft may then be closed without tension by swinging the flap across to the opposite side, previously prepared in the usual way (see Figure IV). In this manner we are able to deal satisfactorily not only with very wide clefts, but also with those much more difficult cases in which failure with loss of tissue has occurred at a previous operation.

FIGURE IV.

Diagram A shows area of flap raised under which the skin graft is inserted. B shows the flap turned over fourteen days later to fill in the cleft. Dotted lines here indicate the area skin grafted.

Width of Cleft.

When the cleft is extremely wide and the available tissue is proportionately small, it has been my practice to adopt a totally different method of procedure. For want of a better term I call it the "bar and velum" method. No attempt is made to close the cleft surgically, but by joining the two halves of the uvula a muscular bar is formed. This is done without tension and in the manner shown. The bar should immediately function when the pharynx is tickled, that is, it should rise and fall and approximate to the posterior pharyngeal wall (see Figure V). When the bar is soundly healed the patient is provided with an artificial velum made of vulcanite and hinged to the posterior margin of a denture. On the upper surface of the velum is a hook which passes over the muscular bar, thus movements of the bar are communicated to the velum, the latter rising and falling with the voluntary and involuntary contractions of the palatal muscles. The velum is so constructed that it makes accurate contact with the wall of the pharynx. The method is also most suitable for adolescents and adults and gives better speech results, I

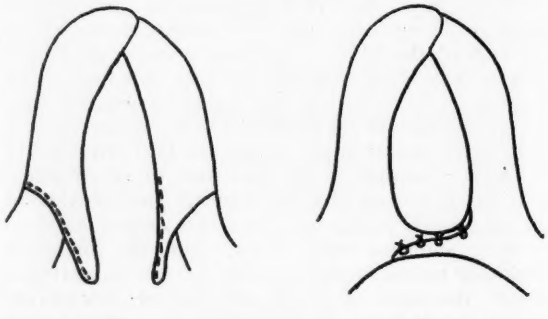

FIGURE V.

Diagram A shows the edges pared for formation of the "bar." Diagram B shows the two halves of the uvula sutured to form the "bar."

think, than any other method. This bears out my contention that the most essential part of cleft palate treatment is a flexible posterior border. I have been astonished on several occasions during the last few years when I have seen patients on whom as babies I had done the bar operation and who in spite of having had no obturator, plate or velum fitted were speaking extraordinarily well, entirely, I think, because of the functioning muscular bar, although the cleft *per se* had not been closed at all. So I believe that if nothing else can be done for a baby's palate, the uvula should be joined and a far greater service will have been done it than by closing the anterior part of the cleft only.

Age for Operation.

Three years used to be the age of election; then came Lane's teaching of "as soon after birth as possible and the palate before the lip." Each of these has points in its favour, but I do not think we can be bound by a hard and fast rule. It is undoubtedly easier to do the palate before the lip; but on the other hand miserable, almost marasmic babies will start to thrive if the lip is done and the palate operation deferred. The danger is lest the palate should be postponed too long. Undoubtedly it should be tackled before the child begins to speak and so commences those bad speech habits which are so difficult to get rid of afterwards. If a partial Brophy operation is indicated, it must be done before three months of age. Another factor is weight. A baby should weigh four kilograms (nine pounds) or over and should be on the upgrade when the soft palate is done. I believe many excellent staphylorrhaphies fail on account of inanition of the baby and its tissues.

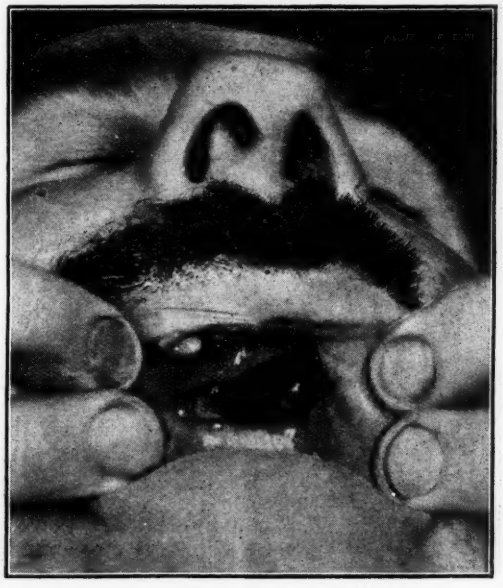

FIGURE VI.
Showing Loss of Palatal Tissue.

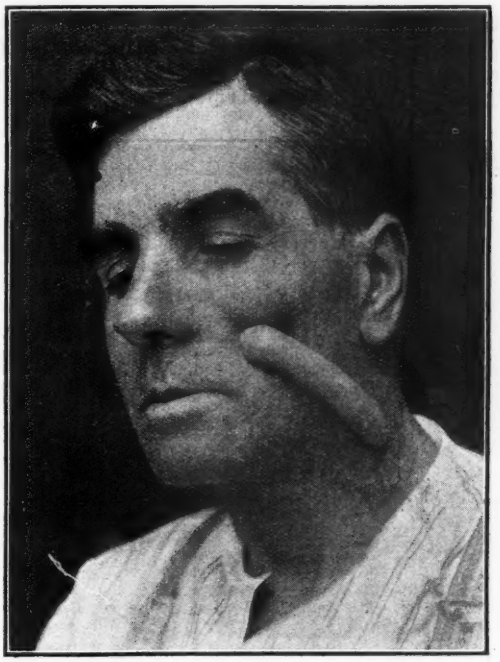

FIGURE VII.
Showing Tube Graft Passing Through the Cheek.

Traumatic Losses of Palatal Tissue.

After gun-shot wounds or excisions of the jaw there remains a more or less large cavity which is extremely incapacitating to the patient, because, even though obturators may be provided, they are usually irksome and very often non-functional for mastication and speech. They are so largely because of the absence of suction for retention. The surgical closure of the cavity is therefore indicated. This may be done in two ways:

1. By the skin grafted flap, the flap being taken from either the buccal mucous membrane or hard palate or both. Whilst this method is quite suitable for small losses, it is not good for large repairs, because it does not give a solid enough base for a denture to rest upon.

2. By a tube graft from the neck (or abdomen). The method of procedure is as follows. A tube is fashioned in the usual manner at the site selected as most suitable. At the end of a fortnight the posterior or most distal margin of the cavity of the palate are freshened. The tube is detached at its lower end and split along each side. It is then swung upwards and inserted either through the mouth or cheek and the split margins carefully sutured to the margins of the cavity. In ten days or a fortnight the anterior portion of the cleft or cavity is dealt with in a similar manner, the remainder of the tube unused being returned to the neck. This leaves the cavity of the palate or jaw closed by an island of tissue imported from the lower part of the neck or abdomen. There are these great advantages: (i) there is good thick

skin on both nasal and oral surfaces and (ii) the graft is sufficiently solid to bear the pressure of a denture and to withstand the effect of suction (see Figures VI, VII and VIII). The method is, I

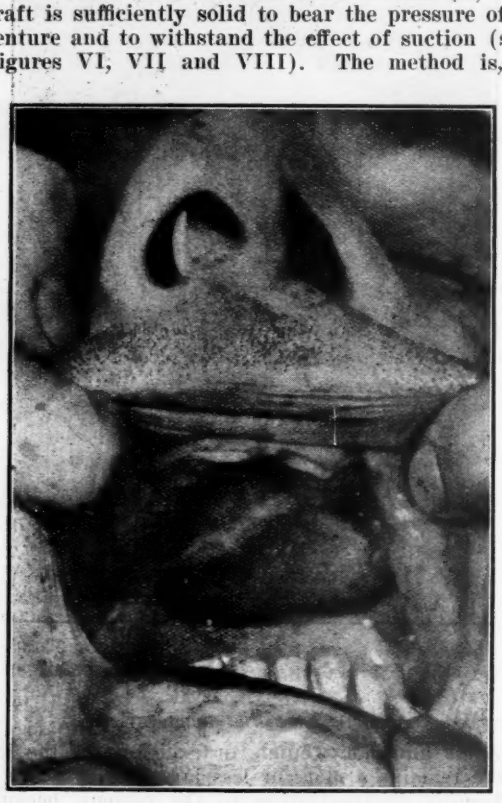

FIGURE VIII.
Showing Palatal Loss Restored by Tube Graft.

believe, original and I first used it during the war, but it is a never ceasing source of wonder to me how such grafts live and thrive and become assimilated to normal mucous membrane, bathed as they are by food, saliva and organisms, for, given a healthy tube and correct technique, it should not fail.

Reports of Cases.

PELLAGROUS DERMATITIS.

By NORMAN PAUL, M.B. (Sydney),
Honorary Dermatologist, Royal Alexandra Hospital for Children, Sydney.

IN view of the fact of the occurrence of sporadic cases of pellagra it has been suggested to me that a record of the history of a patient with this condition whom I showed at a meeting of the Sydney Hospital Clinical Society, would be of interest.

The following are notes which I read at that meeting, together with a pathological report of a section of the skin of the forearm by Dr. Keith Inglis.

Clinical History.

W.B., aged forty-six, a rockchopper by occupation for thirteen years, had on account of progressive weakness to relinquish his work and is now in receipt of State aid for himself and his family.

His sputum was examined at the Board of Health twelve months ago and also six months ago for tubercle bacilli, but on each occasion none was found.

For some time, although not during the whole period of his trouble, the patient has been an edentulous man and has been compelled to live mainly on farinaceous foods which he supplemented with a moderate amount of beer.

The present eruption manifested itself five or six years ago, appearing first on the dorsum of the hands and forearms, erythema, vesicles and bullæ being amongst its early lesions.

He has been under my observation for about two years.

The patient has had dyspepsia for the past eight or nine months with no desire for food and a feeling of fullness. The day previous to the taking of these notes, he stated that a small plate of bread and milk in the morning and a small cup of mutton broth in the evening satisfied his appetite. He complains of a salty taste in the mouth, of gastric flatulence and of a soreness at the left angle of his mouth. There is no salivation, no vomiting, no diarrhœa, but constipation.

He is troubled with insomnia and sleeps on an average from 2 a.m. to 6 a.m., states that he gets irritable much more readily now than formerly and what he once laughed at, now annoys him. For some time prior to the taking of these notes he had attacks of vertigo at least once a day, had pains in the back and if he bends down it is with difficulty he straightens himself up. He complains of nervousness, lassitude, walks slowly and has a worried expression. Urine is free from albumin and sugar, but he has frequency at night and gets up four or five times. There is no dysphagia, no headaches are present. Recently he stated that he had an ulcer on each eye; these were treated at Balmain Hospital and the following is a copy of a letter I received from the resident medical officer at that hospital.

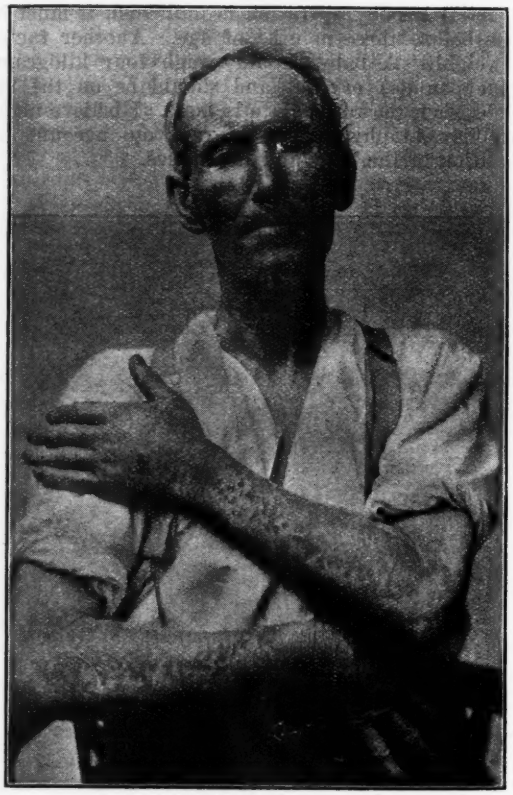

FIGURE I.
Showing Pellagrous Dermatitis of Face, Forearms, *et cetera*.

W.B. first attended this hospital on the 31st January, and was treated for marginal ulcers, the condition being cured. On the 18th March he first attended out-patients for medical treatment. He complained of a heavy feeling in the stomach for four months. The pain was continuous and aggravated by taking food. He had lost a good deal of weight. He had lost twenty-one pounds in the last seven or eight weeks. He suffered from constipation, the motions being round and hard. He had been treated with Mist. Gent. Alk. and bismuth mixture. An X ray of the whole intestinal tract shows no organic lesion.

The cutaneous lesions have existed for five or six years, are on parts exposed to light or rather sunlight, namely, the dorsum of hands, forearms, face and neck. The lesions are symmetrical and when I first saw him two years ago, were sharply delineated, but with subsequent peripheral atrophic thinning the line of demarcation, especially on the forearms, is not so clearly defined (see Figure I). During the past month with the approach of winter, the dermatitis on exposed parts has greatly improved. In summer it assumes a brighter hue or is of more vivid red colour.

The skin eruption in the present case has passed through the following somewhat usual clinical appearance, constant in pellagra: (i) Congestion, (ii) inflammation, (iii) thickening and pigmentation, (iv) atrophic thinning. All these characteristics have been noted. The condition of the face and neck resembles a recurrent and persistent solar erythema. On the back of the neck the integument presents a thin and wrinkled appearance, with a tendency to laminaceous exfoliation. The dermatitis affects the entire face with the exception of the forehead, ending abruptly and symmetrically at the temporal regions and suggests that the omission of the forehead is due to the protection afforded by the hat. On the back of the neck the eruption ends above abruptly at the hairy margin, whilst below both anteriorly and posteriorly there is a tendency to atrophic thinning (see Figure II). On the dorsum of the forearms and hands the colour has been a dull lilac, with thickening and an atrophic thinning at the border, but they orginally presented a dermatitis analogous to that on the posterior surface of the neck. As the patient has not worked for some time, the dorsum of the forearms has not been exposed to sunlight.

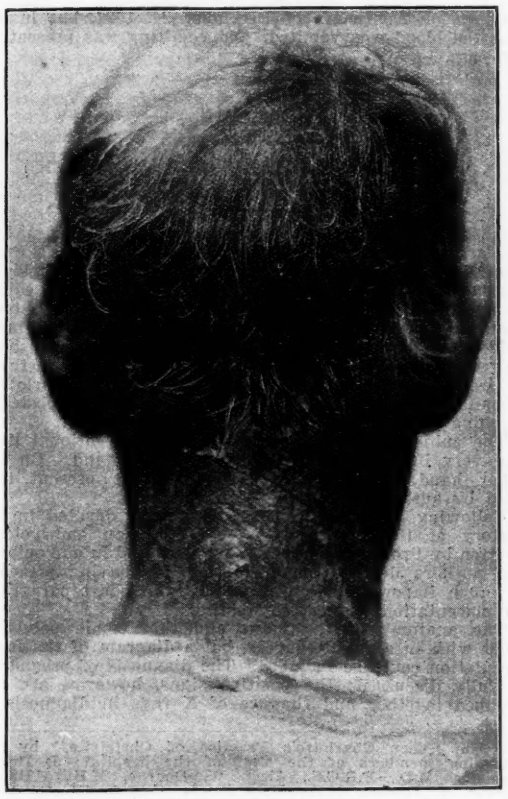

FIGURE II.
Pellagrous Dermatitis, Showing Laminaceous Exfoliation.

The dorsum of the phalanges, especially the distal phalanges, is congested in winter and erythematous in summer. The dorsum of the phalanges of the feet is similarly congested. The subjective symptoms have been burning and itching.

Pathological Report by Dr. Keith Inglis.

On microscopical examination sections show hyperkeratosis. Portions of the epiderm are thin. The subjacent connective tissue shows fibrosis. Some coil glands are enmeshed in the fibrous tissue. Immediately beneath the epiderm are collections of inflammatory cells, chiefly plasma cells and lymphocytes.

With the distribution of the eruption on parts exposed to sunlight, its symmetry, its sharp line of demarcation, the character and evolution of the eruption, together with associated gastro-intestinal and nerve symptoms combine to present the clinical picture of pellagra.

AN UNUSUAL EPIDEMIC.

By J. R. NIMMO, M.B. (Sydney),
Narrandera, New South Wales.

DURING March and April of this year there has occurred a number of cases of a disease which I cannot nail down as any known epidemic, nor cast into the practitioner's "dust-bin" of diagnosis and name "influenza."

The fact that the disease may have occurred elsewhere than in Riverina, prompts me to report certain observations and hope for some enlightenment.

A brief description of the symptoms and course of the disease is all that is possible at this early stage.

Clinical Manifestations.

There are three main symptoms: pain, skin eruption and general manifestations.

Painful swelling of the joints is the chief characteristic of the disease. The onset is usually sudden and any of the joints may be affected. Sometimes the patient complains of pain in the wrist and hand, then in twenty-four to forty-eight hours the pain extends to other joints. In slight attacks it extends to one or two and in severer cases to most of the joints of the body. Pain may be present without visible swelling and there is no "heat and redness" such as is manifested in acute rheumatism. The arthritic manifestations commence to subside after three or four days, but pain may remain or recur in one or more joints for three to four weeks. Usually the patient returns to work at the end of a week and then experiences a recurrence of pain in one or more joints. This is relieved by rest, only to recur again slightly on the exertion of work.

There is usually an herpetic eruption on the arms and legs. The rash appears suddenly, sometimes twenty-four hours before and sometimes almost simultaneously with the arthritic symptoms. Usually no more than a score of these herpetic spots appear, although the rash may extend on to the neck and body. The vesicles generally dry up and disappear in five or six days. In one case there was an erythematous rash with subsequent complete and rapid desquamation. (This patient never felt indisposed, but "was worried about his skin.") In a few cases the rash has slightly resembled a measles eruption, but the spots have been comparatively few and distributed on the limbs

and chest. The rash is sometimes itchy but more often quite painless.

In regard to general symptoms, in the severer cases there have been nausea, vomiting and general alimentary disturbance. In the milder (usual type) forms there is almost a complete absence of general constitutional disturbance. In fact the patient complains only of "soreness in the joints." In a few cases in which it has been possible to examine the urine, no abnormality was detected. There is usually no rise of temperature. On a conservative estimate there must have been over one hundred (perhaps many more) cases of this disease hereabouts in the last six weeks, yet only an insignificant number of patients have been ill enough to seek hospital treatment. All the practitioners (four in number) in this town have treated a number of patients and from careful inquiries there is an equal number of affected persons who have considered the thing too slight to consult their doctor. Nevertheless, many individuals have been unable to carry on their employment for periods up to three weeks from this cause.

Ætiology and Diagnosis.

Briefly, one is struck by the analogy between the symptoms of this disease and those of "serum sickness." The joint manifestations and the occasional alimentary symptoms are similar The skin reactions are not so prominent as in serum sickness, but occasional patients have had severe itching.

The absence of the usual constitutional disturbances found in an acute bacterial infection causes me to class this complaint among the allergic phenomena.

The mosquito can probably be ruled out of court as a causative agent.

Would it be possible for stinging insects to inject enough foreign protein into their victims to set up an allergic reaction such as has been described? There has been a plague of "stinging flies" in this district for the last two months. Residents of long standing cannot remember such a previous occurrence. Unfortunately the fly theory occurred to me too late to question all patients closely on their experiences. Every one of six so questioned gave a graphic description of their sufferings whilst being attacked by these insects. One patient, a middle aged woman, who came to obtain relief for her sore joints, informed me that six out of eight people in the house had been "troubled with the complaint" and that the flies had been there "in thousands." She also informed me that most of the people living in her neighbourhood had had "sore joints."

An important feature which negatives the possibility of an epidemic disease, is the fact that for every town sufferer of the complaint there must be from six to ten (estimate only) country dwellers involved. Also the disease does not seem to be spreading amongst school children. It would be interesting to learn in what districts this disease has been prevalent and whether the plague of "stinging flies" is also prevalent in those districts.

It would be expected that an epidemic would be rife in the big towns and cities, whereas should the disease be caused by an insect, the country districts solely would be affected.

A CASE OF MELÆNA NEONATORUM.

By M. ELLIOT SMITH, M.B., Ch.M. (Sydney), F.R.C.S. (Edinburgh), L.M. (Dublin),

Honorary Obstetrician, Antenatal Clinic, Lady Bowen Hospital, Brisbane.

MRS. A.S., aged twenty-five years, pregnant for the second time, consulted me when four months pregnant. She attended regularly during the antenatal period and was healthy and well. One evening she came, complaining of headaches and swelling of the feet of twenty-four hours' duration. The urine contained a very faint cloud of albumin and the systolic blood pressure was 135 millimetres of mercury. She was given suitable advice and treatment, but came into labour six hours later at 1 a.m. the following day, being five weeks before the expected date. I examined her *per vaginam* eight hours later when the *os* was fully dilated and the membranes bulging. The membranes were ruptured to give exit to a large quantity of deeply blood stained *liquor amnii*. The head came down on to the perineum and was allowed to remain there for one hour before forceps were applied. Delay was then seen to be due to the cord being twined round the neck, producing relative shortening. The child was a female, weighing 2·7 kilograms (six pounds).

A second child was then found to be present in the uterus and was born naturally in fifteen minutes, the *liquor amnii* in the second amniotic sac being quite clear and free from blood. The second child, also a female, weighed 2·6 kilograms (five pounds twelve ounces). There were two separate placentæ.

During the first twenty-four hours the elder child passed three stools consisting mainly of bright fresh blood.

On the following morning two cubic centimetres of "Hæmostatic Serum" were given subcutaneously in ten cubic centimetres of normal saline solution. During this day four or five dark tarry stools were passed. On the third day three more tarry motions were passed. After that, no more blood was seen and recovery was uneventful. The child was very deeply jaundiced for ten days following birth. The child was not put to the breast till the fourth day, but was given cold boiled water with a pipette. At the end of a week she weighed only 2·1 kilograms (four and three-quarter pounds).

The second twin was quite normal. Both children were breast fed and did well. The mother's puerperium was uneventful.

This case is of interest as giving definite evidence of intrauterine melæna. I have been unable to find any mention of such a condition in textbooks of obstetrics. Dr. W. L. Crowther reported a similar case in THE MEDICAL JOURNAL OF AUSTRALIA of December 24, 1927, but in his case the blood was vomited. No vomiting was present in my case.

Reviews.

OBSTETRICS AS PRACTISED AT QUEEN CHARLOTTE'S HOSPITAL.

ANOTHER incomplete work concerning obstetrics has appeared under the title of "The Queen Charlotte's Practice of Obstetrics."[1] This represents the views held by six members of the honorary staff and has been edited by one of them. In no way can it be accepted as a textbook on obstetrics. It is evident that six specialists must hold many diverse views and these have apparently been so reduced to a common basis that standardized methods of treatment are now carried out at Queen Charlotte's Hospital. This attempt to simplify and improve obstetric teaching and practice is to be highly commended.

The subject has been dealt with on conventional lines and very little new or original is to be found. On the other hand, many important methods at present still used by authorities receive scant mention.

Following a preface, a short chapter is devoted to the history of the institution. A section on embryology, written by Professor Frazer, is excellent and in our opinion the authors deserve commendation for having attached so much importance to this subject. A short paragraph on placentation is most interesting.

The anatomy of the fœtus and the female pelvis is dealt with in a small chapter, but a diagram of the fœtal circulation could be included. The diagnosis of pregnancy is fully discussed; the positive signs, however, are not grouped together and the use of X rays in diagnosis is

[1] "The Queen Charlotte's Practice of Obstetrics," by the following members of the staff of the hospital: J. Bright Banister, M.D., F.R.C.S., Aleck W. Bourne, M.B., F.R.C.S., Trevor B. Davies, M.D., F.R.C.S., L. Carnac Rivett, M.C., F.R.C.S., L. G. Phillips, M.S., F.R.C.S., and C. S. Lane-Roberts, M.S., F.R.C.S.; 1927. London: J. and A. Churchill; Sydney: Angus and Robertson, Limited. Royal 8vo., pp. 637, with illustrations. Price: 21s. net.

omitted here, although fully discussed in a later section.

The very important subject of ante-natal care receives adequate consideration. It is found that students use very loosely the terms "engaged" and "fixed" when referring to the fœtal head; the former term should be defined as the passage of the bi-parietal diameter through the pelvic inlet. Thus a head may be fixed without being engaged, as is frequently found when forceps delivery has failed. The methods of abdominal examination are fairly well set forth, but the order of various grips or steps is not as usually described and new reference terms are introduced; this may confuse the student.

The phases of the process of abortion are very clearly described and in one chapter an excellent account of this subject is given. The illustrations are helpful, but it appears from these that the placenta is fundal in position, which is rare.

Vomiting in pregnancy, when excessive, is considered to be of neurotic origin in the early months and toxæmic when occurring during the latter months. This is a convenient assumption and one probably justified by the effects of and the response to treatment. Patients with "neurotic" vomiting do, however, if the condition is neglected, become intensely "toxic" after tissue starvation and defective oxidation and then they present all the features of the true toxæmic type.

Albuminuria and eclampsia are well and amply dealt with. It would appear that the authors misconceive Tweedy's theory of the ætiology of eclampsia which is that there is probably a tox-albumin of placental origin and that normally this albumin is neutralized by those ferments, limited in quantity, which fix the amino acids from food. When these ferments are so used up, they are unavailable for the food toxins which proceed to exert their action on liver, kidneys and other organs.

No figures are given of the results obtained in the treatment of eclampsia at Queen Charlotte's Hospital, nor is any mention made of Stroganoff's method.

There is most excellent reading in the chapter dealing with disorders associated with pregnancy, cardiac disease in pregnancy being particularly well discussed. The dangers of influenza to the pregnant woman are shown to be very great and when this disease is epidemic all prospective mothers should receive suitable prophylactic treatment.

The stages of labour are referred to before any description of them is mentioned; this may confuse the student. In the description of the second stage of labour on page 249, there appears the following: "the movement of restitution undoes the slight twist on the child's neck, and with the next pain the face turns towards one of the mother's thighs—the left thigh in a first vertex." Surely the right thigh is meant.

An interesting section on spasm of the cervix appears in the chapter devoted to delay in labour. It is held that this condition is almost certainly identical with the so-called rigidity of the cervix and is responsible for those serious cases of persistent uterine inertia.

The treatment of posterior positions of the occiput is not very conclusive and no mention is made of the most valuable help obtained by using Buist's pads during labour. Forceps applied "with an almost antero-posterior grip" sounds unconvincing and rather unscientific; in such cases when the head is tightly wedged in the brim, Kiellands forceps are specially applicable.

Diagram number 147 represents a split pelvis or Robert's pelvis. These, however, are two distinct types; the former possesses sacral alæ and the latter is due to the absence or imperfect development of both sacral alæ.

The treatment of *placenta prævia* has always been a debatable subject and the different views of the authors have been advanced in such a manner that it will be rather difficult for the student to form an opinion as to the correct procedure. However, from the table given it will be apparent that podalic version and pulling down a leg are applicable in the majority of cases and generally give the best maternal results under all conditions.

Exception is taken to a statement appearing under prophylactic treatment of puerperal infection. The authors consider two vaginal examinations a minimum in normal labour. No vaginal examinations are necessary in normal labour and all necessary information can be obtained by abdominal palpation and intelligent observation. When labour is proceeding abnormally the indication exists for vaginal examination.

An illustration of the introduction of bougies by Krause's method is shown, but the best technique enables the bougies to be inserted directly into the uterus without touching anything. Pubiotomy and the low cervical operation for Cæsarean section are not practised at Queen Charlotte's Hospital.

The book concludes with useful chapters on reproductive insanity, pituitary extract in obstetrics and the use of X rays in obstetrics.

The printing is excellent and the book is easy to read. There are a few errors in spelling, such as on page 41 anti- for ante-verted. With the exceptions already noted, the illustrations are very good.

Altogether there is much useful information in this volume and it constitutes a helpful and valuable adjunct to any good textbook.

MENDELISM.

DR. J. A. E. CREW, the distinguished student of genetics, was invited to deliver a series of lectures at the University of Birmingham, as the first William Withering Memorial Lecturer. William Withering, M.D., F.R.S., was a distinguished botanist and chemist and is remembered in medicine because in 1776 he introduced digitalis for the treatment of cardiac and dropsical affections. These lectures have been gathered into book form under the title of the "Organic Inheritance in Man."[1]

The book falls into two parts. The first is an admirable exposition of the results of genetic investigation. In discussing the two laws of Mendel, the segregation and the independent assortment of the genes, attention is rightly drawn to the fact that the ideas of dominance and recessiveness are not essential to the validity of this form of inheritance. The important point is that, although the first generation may be hybrid, the characters being a compromise, yet in the next generation the hybrid characters should segregate and appear in the predictable ratio. Later when the author applies the terms dominant and recessive to the inheritance of human defects, he of course insists on the difficulty of deciding what is a unit character, what accessory factors are concerned in their production and on the fact of their irregular display. Some of the irregularity might be dispelled by a more intensive study of the F_2 generation.

The work of the Morgan school is treated most lucidly, for it is not an easy subject. The evidence for the chromosomal theory of heredity is now almost overwhelming. It seems certain that the hereditary characters are referable to paired elements (genes) in the germinal material. The gene is the locus of the unit character and the two genes of a pair may be the same or opposed (allelomorphic). The gene is a particular organization at a particular place, at a particular time in the chromatin. Its ultimate nature is unknown, but in size it may be something of the order of twenty times the size of the hæmoglobin molecule. It is assumed to be produced by physico-chemical factors and its action may resemble that of enzymes. Each gene in the pair separates during the maturation of the germ. Each germ cell can possess only one gene of the pair. This is Mendel's first law of segregation. Mendel's second law finds its explanation in the behaviour of the chromosomes, provided that the members or genes are sorted independently of each other. The hereditary characters fall into a series of linkage groups, the number of groups corresponding with the number of chromosomes. Members or genes of different linkage groups are inherited entirely independently of one another, but at times there occurs an orderly interchange (crossing over) of the genes in corresponding linkage groups. The chances of crossing over are

[1] "Organic Inheritance in Man," by F. A. E. Crew, M.D., D.Sc., Ph.D.: 1927. London: Oliver and Boyd. Demy 8vo., p. 240, with illustrations. Price: 12s. 6d. net.

greatest when the genes are far apart, less when the distance between them diminishes. The calculation of the crossing over value indicates the relative position of the genes in the linkage group and moreover suggests that the genes are arranged in a linear series.

Since there are twenty-four chromosomes in man, the possible combinations are practically infinite and the chances of crossing over enormous. The initial tendency to maleness or femaleness depends on the differences between the gametes, the XY chromosomes of one half the sperm leading to male individuals. It is not to be supposed that the gene acts independently and once and for all determines subsequent events. The balance of the genes, the interaction with the cytoplasm and the internal and external environment of ontogeny must be considered. One has only to recall the facts of sex reversal to realize this point of view so cogently expressed by the author.

The later chapters of the book concern themselves with the application of these facts to inheritance in man. It can only be remarked that the genetic theory at the moment has very little application, not because the theory is inadequate, but because the conditions are so infinitely complicated and the knowledge of the facts so meagre. The general statement that genetic factors are more important than any others and that the better parents have the better children might be acceptable to all. With the exception of some digital abnormalities, some visual anomalies and one or two sex-linked diseases, this generalization is the best that can be done, for such important aspects of man's inheritance as mental ability, for instance.

The immense amount of data gathered about the inheritance of physical and mental qualities, the inheritance of disease, the constitutional proclivities to certain disease are suggestive rather than of immediate value. Feeble-mindedness furnishes a good instance of the difficulties of practical measures. It is usually defined in terms of adequacy to the environment, though which environment is usually left vague. Its variations in degree and kind suggest the operation of several factors, yet it is usually regarded as a recessive unit character. Feeble-mindedness will occur whenever two parents meet, each bearing the recessive character implicit or explicit. It has been calculated that segregation or sterilization of the explicit feeble-minded, assuming that the gene is uniformly diffused through the population and that mating is entirely at random, would take sixty-eight generations to reduce the rate from one per one thousand to one per ten thousand. The results would be very much better if the feeble-minded tended to accumulate in a definite stratum of the population and if marriage was not entirely a random choice. Both of these assumptions are in more or less degree realized in actuality. However, segregation would have to be assisted by the pious wish that the near relatives of the feeble-minded would abstain from marriage. The author amusingly suggests that instead of taxing bachelors and endowing matrimony, it would be wiser to subsidize certain bachelors and spinsters in order that they should be persuaded not to marry and that the State should not have to provide for their undesirable offspring.

Dr. Crew has written a most erudite and stimulating book on a theme as difficult as it is important.

A MANUAL OF PSYCHIATRY.

IN the latest addition to the textbooks on mental diseases, Norman's "Mental Disorders," the student will find a clear exposition on conventional lines of the various clinical syndromes.[1] There will be little for him to unlearn later in practice and he will escape the difficult task of choosing between the involved and sometimes often unassimilable psychological theories which dominate the field of psychiatry at the present day. On the physical plane he will find an account of the more definite pathological conditions associated with mental disorders from which all speculative material has been omitted. The book is eminently readable and throughout there is evidence of the author's literary gifts and wide reading.

A chapter is devoted to an historical survey. Another deals with clinical examples in life and literature. In the appendix there are accounts of Laura Bridgman and Helen Keller and descriptions of several classical examples of "wild" children. These latter features are a novelty in a textbook of this type and add to the value of the work. There are several excellent illustrations of facial expression in the psychoses and of types of congenital defect, also coloured plates of the colloidal gold reaction and of the cytology of paretic cerebro-spinal fluid

The book may be recommended to students who are content with a general acquaintance with the subject, but the practitioner may turn in vain for guidance on several material points. For example, mention is made of the malarial treatment of general paralysis without reference to details, the variety of malaria employed or the statistical results of treatment. A description of the juvenile form of paresis does not appear to find a place in this book. In the chapter on mental deficiency there is no reference to any psychological or intelligence tests.

The value of this book would be increased by the addition of a section on case-taking. The "make-up" of this volume is attractive, the type is clear and the photographs are well reproduced. Those who look for an outline which is readable and sound and free from the obfuscations which nullify the value of so much psychiatric literature, will find their needs met by this handbook.

[1] "Mental Disorders: A Handbook for Students and Practitioners," by Hubert J. Norman, M.B., Ch.B. (Edin.), D.P.H. (Edin. and Glasgow); 1928. Edinburgh: E. and S. Livingstone. Crown 8vo., pp. 480, with illustrations. Price: 14s. net.

FISTULA-IN-ANO.

WE have read through Dr. Drueck's book[1] on fistula of the anus and rectum with much interest. His book is obviously the work of a sound and thoughtful surgeon who has had a large experience in the class of work discussed. He goes carefully into the mode of causation of different varieties of fistula, their characteristic behaviour, their anatomical features and the treatment which he has found most appropriate for each. Surgeons find fistula of the anus liable to be very refractory; Dr. Drueck inquires why and we believe his explanations are very probable and that the treatment he recommends is always worthy of very careful and respectful consideration. There is always room for a good, thoughtful, practical book like this. But in approving of Dr. Drueck's surgical ideas, we do not find ourselves able to commend his grammar or his literary style. It is the work of a slovenly and illiterate writer and sets the educated reader's teeth on edge. It is not good English and we are equally certain that it is not good American.

FLUSHING AT THE CLIMACTERIC.

A MONOGRAPH called "The Flushings of the Menopause,"[2] by John H. Hannan, is an attempt to explain the mechanism concerned in the production of certain symptoms which cause distress in women at the menopause.

His theory is that there is hyperactivity of the suprarenals in women at the menopause resulting in overaction of the sympathetic system causing flushing. This hyperactivity of the suprarenals is due to the absence or deficiency of the internal secretion of the ovaries at the menopause.

The author records personal observations of one hundred and thirty-one women, of whom 73·3% complained of some degree of flushing and 26·7% did not.

The author's amount of material is too small to justify the formation of definite conclusions. Some reasonable suggestions are made as to treatment.

[1] "Fistula of the Anus and Rectum," by Charles John Drueck, M.D., F.A.C.S.; 1927; Philadelphia: F. A. Davis Company. Demy 8vo., pp. 330, with illustrations. Price: $3.50 net.

[2] "The Flushings of the Menopause," by John H. Hannan, M.A., M.D., B.Ch. (Cantab.); 1927. London: Baillière, Tindall and Cox. Demy 8vo., pp. 60. Price: 3s. 6d. net.

The Medical Journal of Australia

SATURDAY, MAY 5, 1928.

One or Six?

THE Royal Commission on Health dealt with many matters that have reference to problems other than hygiene. Among these is the question of medical registration. It will be remembered that in its report the Royal Commission's attention was called to the anomalies arising from the necessity of medical practitioners who have certain administrative duties imposed on them by the Commonwealth Department of Health, to become registered in one State after another, as these duties have to be performed in different parts of the Commonwealth. Mention is made of the evidence given before the Commission in regard to the general advantages accruing to the medical profession if medical registration could be carried out by the Commonwealth rather than by the States. In May, 1926, we discussed the problem of medical registration in Australia from a general point of view and more particularly from the aspect of the medical profession itself. We have pointed out that the community suffers not only because the minimum requirements for registration vary in the six States, but also because misrepresentation and fraud may escape detection while there are six portals.

The Federal Health Council, a body formed on the recommendation of the Royal Commission on Health, with the Director-General of Health of the Commonwealth and the chief health officers of the several States as members, has recently considered this matter and has asked the Director-General of Health of the Commonwealth to discuss it with the Federal Committee of the British Medical Association in Australia. The Royal Commission on Health recommended that:

> The Commonwealth should endeavour to arrange for the transfer to the Commonwealth from the States of their powers with regard to registration of medical practitioners.

From the practical aspect it is evident that unless the States are prepared to surrender their sovereign rights in this regard, it would be useless to urge the transfer. We are not optimistic enough to believe that the people of Australia would regard this matter of sufficient importance to submit it to the test of a referendum. It appears that the discussion at the Federal Health Council was of a general nature, that the members were inclined to regard the proposal favourably, but that no definite scheme was adopted, pending an expression of opinion from the medical profession. The Federal Committee has now requested the Director-General of Health to suggest to the Federal Government that it draw up a scheme to give effect to the recommendation of the Royal Commission on Health. As far as that recommendation goes, the medical profession has already given its approval when it considered and commented on the report of the Royal Commission. Early in 1914 the Federal Committee considered the then existing *Medical Acts* and sought to remedy the defects by devising an ideal set of conditions that could be embodied in an act. Little progress was made at first, but in 1918 the Committee adopted a report on the subject. The Branches expressed the opinion that there should be uniformity, but that as it was doubtful whether a Commonwealth act would be as acceptable as the best of the State acts, it would be hazardous to take steps to induce the several States to surrender their rights in this connexion.

It is unnecessary to recapitulate the arguments in favour of a single registration board. It is also superfluous to emphasize the advantages of a single authority prescribing the standard of knowledge required for a registrable degree. On the other hand the medical profession and the legislature will have to give very careful consideration to any proposals that may be put forward in regard to the disciplinary powers of an Australian medical board. If a single board is established and this board is given full powers to remove the name of a medical practitioner found guilty of "infamous conduct in a professional respect," it would be advisable to constitute efficient courts of inquiry in each State to collect the evidence and to afford the respondent an opportunity of explaining his conduct. The General

Medical Council has jurisdiction over the whole of Great Britain and Ireland. It is, however, one thing to require a medical practitioner, even if he resides in Scotland or Ireland, to attend a session of the General Medical Council to show cause why his name should not be removed from the register, but it would be a different matter to expect a practitioner residing in Western Australia to travel to Sydney or Melbourne for this purpose. Were it not for the immense distances in Australia, there would be an undoubted advantage in one court composed of practitioners resident in different parts of the continent. When this question is under consideration, it will be necessary to create machinery for the bringing of complaints to the notice of the medical board. Under the existing conditions, it is nobody's business to act as complainant.

Current Comment.

THE ACTION OF ULTRA-VIOLET LIGHT ON MICROORGANISMS.

RADIANT energy is absorbed to some extent by every object with which it comes in contact. It is known that glass absorbs rays of longer wave length than those which are known as light and also rays of shorter wave length. In other words a part of the energy of a beam of light which traverses any substance, is removed and held back in the substance. The passage of the beam of light through the substance must of necessity produce an effect on the substance. The part of the beam which is absorbed, sets into vibration the molecules of the absorbing substance, if any of the vibration periods of the light waves coincide with those of the latter. The result may be a chemical or an electrical (a physical) reaction. The majority of the constituents of living cells are colourless, that is, they do not absorb rays of the wave length of visible light. Many of these constituents, however, absorb ultra-violet light and thus it is found that light of this wave length has a powerful effect on living tissues. Ultra-violet radiation is known to produce degeneration of epidermal cells, characterized by pyknosis of the nuclei and by contraction, homogenization and probably coagulation of the protoplasm. The action of ultra-violet rays leads thus to the absorption of damaged cell products. It has been shown by Lewis and Zotterman that the action of ultra-violet light on cutaneous vessels results in the setting free in the skin of vaso-dilating substances with histamine-like action which are conducted away by lymphatic channels. Radiation may have an effect on remote organs by reflex action and there may be some change in the capillary blood, but the greater part of the effects of radiation are produced by chemical means, by substances formed in the skin by the direct action of radiation. At the same time it must be remembered that photosensitization may play a part in the process and that all photochemical reactions are initiated by a change in configuration and velocity of the electrons absorbing the radiant energy. Laurens has put the matter shortly in a recent review of the subject by stating that if the incipient energy has small enough wave lengths to produce vibrations in the electrons instead of in the molecules and atoms, its absorption may result in the activation of electrons. The activated electrons may be ejected from the molecule as the result of absorption of energy, in which case the molecule is ionized, or they may be displaced to an outer orbit in which case the atom or molecule is activated. In either case, however, it will manifest altered chemical reactions.

A bacterium is a unicellular organism and thus similar to any of the tissue cells of the body. The statement that the direct action of ultra-violet light on tissue cells is lethal or destructive holds equally with regard to bacteria. T. H. B. Bedford has recently carried out a series of observations[1] in which he tries to prove three things: (i) That ultra-violet light is capable under ordinary conditions of producing hydrogen peroxide, (ii) that the destruction of microorganisms by ultra-violet light is due and is directly proportional to the production of this substance and (iii) that the relative susceptibility of different microorganisms to ultra-violet light is of the same order as their relative susceptibility to hydrogen peroxide as tested *in vitro*. He points out that there is no really specific test for hydrogen peroxide in minute quantities. The starch-iodide and titanium sulphate colour reactions can both be obtained, but both are non-specific and unreliable. When starch-iodide solution was placed in a watch glass and was irradiated with a Kromayer lamp, a blue colour was produced in four minutes. When titanium sulphate solution was irradiated in the same way for twenty minutes, a yellow colour was produced. Similar results were obtained when ordinary agar plates which had been dried, were irradiated and the test solution was poured on to the surface of the medium. According to the work of McLeod and Gordon (1922) the green colour produced on a heated blood agar plate by the early growth of an organism such as the pneumococcus is due to hydrogen peroxide formation. Bedford therefore concludes that if ultra-violet light produces hydrogen peroxide, it should be possible on irradiating such a plate to obtain a similar green colour. He covered a chocolate plate of heated blood agar by an opaque mask and at the same time left a small T-shaped area bare. He then irradiated the whole for a period of forty minutes at a distance of 7·5 centimetres. When the mask was removed, there was found a clear-cut green T which was indistinguishable from that produced by the pneumococcus. Bedford

[1] *The British Journal of Experimental Pathology*, December, 1927.

admits that this does not provide definite proof of peroxide formation. He wishes this finding to be regarded as merely "additional evidence" to be considered in conjunction with his other findings. These will be shortly described.

In the first experiment an inoculum consisting of an emulsion of a twenty-four hour agar culture was used on an ordinary agar plate. Each inoculation was made five minutes after exposure of the plate to irradiation. The plate was deposited at once in an incubator and a reading was taken after eighteen hours' incubation at 37° C.. The organisms used were the *Vibrio cholerœ, Bacillus diphtheriæ,* staphylococci, *Bacillus hofmanni, Bacillus typhosus.* When the plate had been exposed for five minutes, there was no inhibition of growth. No mention is made of a control plate, but it may be presumed that one was used. In any case a comparison could be made between the five minutes plate and those which were exposed for longer times. When the plate had been exposed for ten minutes, there was slight inhibition of the growth of *Vibrio cholerœ,* but no inhibition of the growth of the other organisms. After twenty minutes' exposure inhibition of *Vibrio cholerœ* was "marked" and that of *Bacillus diphtheriæ* slight. After forty minutes' inoculation inhibition was complete with *Vibrio cholerœ,* "marked" with *Bacillus diphtheriæ,* slight with the staphylococcus and very slight with *Bacillus hofmanni;* there was still no inhibition with *Bacillus typhosus.* Bedford concludes from this that irradiation of ordinary agar media has a profound influence on the growth of organisms subsequently inoculated thereon and that different organisms are inhibited to different degrees. They can be arranged in a descending order as just described. He further adds that inhibition is evidently due to some substance formed in the medium during irradiation. These experiments were repeated in another series in which irradiation was carried out after the plates had been inoculated with the organisms. The periods of exposure to radiation were much shorter. The results in this series were similar to those obtained in the first, except that in the second the destructive action was much more intense and rapid. The relative order of susceptibility was the same in both series and Bedford concludes that the substance responsible for the inhibition was the same in both. He describes the second series as showing "the effect of irradiation of ordinary agar upon the growth of previously inoculated organisms." This statement leaves out of account the fact that the organisms as well as the agar were irradiated. It is probably correct to conclude that the difference in the "destructive action" is due to the fact that the organisms themselves were irradiated. The organisms are living unicellular bodies. Agar is an inert mass. It is thus justifiable to challenge the conclusion reached by Bedford in regard to his first series of irradiation experiments, namely that the inhibition was due to some substance formed in the medium during irradiation. It is much more likely that the irradiation of the medium resulted in the acquisition by the medium of some form of radiant energy, that there was a physical change in the medium and that when the living organisms were subsequently inoculated, a chemical change took place in their substance.

If it be granted that a chemical change took place to produce the results described by Bedford, the next question to be decided is the nature of the change. Bedford discusses this and asks: "Is hydrogen peroxide the inhibitory substance?" He points out that ordinary agar contains no catalase, but that if a medium rich in catalase is used, the inhibitory action of an irradiated plate should be reduced to nothing or at least considerably diminished, if hydrogen peroxide is the sole cause of the inhibition. Since blood agar always contains much catalase, provided that heating has not been too prolonged, Bedford repeated the first set of irradiation experiments which have already been described, but used blood agar instead of ordinary agar. He found that very slight inhibition occurred with *Vibrio cholerœ* after twenty minutes' irradiation and slight inhibition after forty minutes' irradiation. Doubtful inhibition occurred with *Bacillus diphtheriæ* after forty minutes' irradiation and no inhibition occurred with any of the other organisms. Bedford accepts this as evidence that the substance is hydrogen peroxide and offers as additional evidence the comparison of the relative susceptibility of different microorganisms to hydrogen peroxide *in vitro* with their susceptibility to ultra-violet light. He accepts the findings of McLeod and Gordon in regard to the susceptibility of organisms to hydrogen peroxide and points out that they are identical to the relative susceptibility as found by him to ultra-violet light.

Bedford maintains, therefore, that ultra-violet rays exert an influence on microorganisms in virtue of the hydrogen peroxide they produce and that the intense action of the direct rays is due to a production of hydrogen peroxide in the organisms themselves. He holds that this view is in no way contrary to that of Clark who expressed the opinion that the lethal action of ultra-violet light is consequent upon changes in the nature and condition of the proteins of the organisms concerned. That such changes occur is not disputed, but it is Bedford's contention that the changes which determine the death of the organism are mainly the result of peroxide of hydrogen formation. Bedford's views are extremely interesting. It cannot be said that he has proved his contention, but the explanation is attractive and it must be acknowledged as probably correct. He points out in conclusion that no data have been offered by him in connexion with strict anaerobes. The experimental difficulties here are considerable and the number of his experiments so far do not warrant publication. This communication will be awaited with interest. It may not be so, but unfortunately the manner of the presentation of this work gives the impression that Bedford has deliberately set up a thesis and endeavoured to prove it—a dangerous and therefore unwise expedient.

Abstracts from Current Medical Literature.

MEDICINE.

Basal Metabolism in Tropical Countries.

A. J. CORO (*Archivos de la Sociedad de Estudios Clinicos de la Habana*, June, 1927) prefaces the description of experiments carried out by him on the basal metabolism of men and women in the tropics by an historical survey. Whilst the question of basal metabolism has been rather fully worked out in temperate and cold countries, the subject is in its infancy in the tropics. Eijkman in 1896, working on Malays and acclimatized Europeans in Batavia concluded that the basal metabolism was identical in Batavia with what it is in Northern Europe. The Ozorio brothers, in Brazil in 1919, came to the conclusion that "the basal metabolism of tropical man, white or negro, is very inferior to that of the inhabitants of cold and temperate lands." Coro then describes his apparatus and technique. He studied the basal metabolism in forty-five men, mostly fourth year medical students, and about eighty women. Among ten men taken as examples the highest basal metabolism was forty-four calories and the lowest thirty-six—a mean of forty calories. Among nine typical women the highest figure was 41·3 and the lowest 31·1. All calculations were made on the basis of a square metre of surface per hour. Some women were found to give figures as low as thirty calories, but careful subsequent examination revealed in most of these cases latent glandular affections notably of the thyreoid or ovary. The author considers that his experiments substantiate the accuracy of the work carried out by Eijkman and that the differences between his figures and those put forward by Dubois in the United States of America are so insignificant that the latter may be taken as normal for Cuba, as well as for other tropical countries.

O. MONTORO (*Archivos de la Sociedad de Estudios Clinicos de la Habana*, June, 1927) discusses: (i) Different methods of studying the phenomenon of basal metabolism; (ii) his own and other researches, their different results and causes thereof; (iii) the physiological action of the tropics on the white man, metabolism of orientals, acclimatization. His conclusions are: (i) the direct determination of the oxygen consumed is the best index of the changes of energy which take place in the human body; (ii) the ability to calculate the production of heat with great precision, based upon the oxygen consumed, dispenses with the necessity for analysis of gases in most of the experiments; (iii) calorimetric apparatus of the closed circuit type (Benedict-Roth, Krogh) are very accurate and suitable for both clinical and experimental investigations; (iv) the "open circuit" method, though very accurate, is too difficult and costly; (v) the balance of evidence is in support of the figures obtained by Ozorio; (vi) the work of Coro is of no value, owing to the inexperience of the investigator and the defectiveness of his apparatus.

Blood Coagulation.

R. W. CHRISTIE (*The Quarterly Journal of Medicine*, July, 1927) describes studies in blood coagulation and hæmophilia. The coagulation time is normal in most cases of jaundice and purpura, though there is a definite coagulative deficiency. To estimate coagulation successive drops of blood should be taken from a single puncture; normally the first drops will coagulate in two to three minutes, later drops in half to one minute. By this means the time of spontaneous coagulation is found and also an index is obtained of the reaction of the tissues and blood against hæmorrhage. There are two phases in this reaction, first, the bruising of cellular tissue liberates thrombokinase necessary for the clotting of blood and secondly, when blood is shed the platelets collect in masses and become adherent to the intima of the injured blood vessels. On disintegration these platelets yield prothrombin and thrombokinase. In purpura all constituents of the blood and the blood clotting elements are normal except that platelets are usually deficient. Coagulation time is normal as a rule with the first drop of blood; successive drops, however, invariably manifest delay in coagulation time, as a rule one to two minutes instead of the normal half to one minute, due to the deficiency in platelets. In jaundice a hæmorrhagic tendency is common. In many cases, however, coagulation time is normal, though the coagulation curve is similar to the above which occurs in purpura. The hæmorrhagic tendency may be due to deficient platelets which do not agglutinate on account of bile salts lowering the surface tension of the blood. The absence of purpura in jaundice is due to the fact that both diminution of platelets and the presence of a toxin which will damage the capillary endothelium are essential to the causation of purpura. In hæmophilia there is a slow liberation of prothrombin from the blood platelets and also the slow formation of thrombin from prothrombin. The coagulation time is high in hæmophilia; at first it is followed by the usual fall and then it rises in all cases above the original level. In some cases the end point could not be determined on Gill's coagulometer, the coagulation was so slow. Eight patients were examined who had histories of excessive hæmorrhage with no hæmorrhagic family history. The coagulation curve was normal in five and abnormal in three. Three of the five patients with normal curves were operated upon without untoward result. The coagulation curve thus offers a means of differentiating those liable to bleed from others less liable when a history of previous hæmorrhage is obtained. The above conclusions were drawn partly from an examination of the literature and partly from observations made in five cases of purpura, three of jaundice and eight of hæmophilia.

Dextrose Tolerance.

R. HALE-WHITE AND W. W. PAYNE (*The Quarterly Journal of Medicine*, July, 1927) discuss the diagnostic value of dextrose tolerance curves. Thirty-five normal and sixty-nine abnormal subjects were studied. It was concluded that a curve should not be considered abnormal unless the fasting blood sugar content was above 0·120% if the subject was at rest prior to the test being taken. The maximum normal blood sugar level is 0·20% in young adults and the maximum rises until a figure of 0·22% is reached at the age of seventy. The blood sugar curve is also abnormal if the concentration is above 0·120% two hours after the ingestion of food in young adults or three hours after the taking of food in persons sixty years of age or over (Curve V). Four other types of sugar tolerance curves were found in the 104 subjects studied. The normal curve, Curve I, was found in many diseases. Of the three other curves one was characterized by a normal fasting blood sugar concentration, followed by a normal peak with a slow return (Curve II). Another had a high peak, but a normal return (Curve III) and the remaining curve had a high peak but a slow return (Curve IV). These were found so irregularly in different diseases that they were of no diagnostic importance. Curve V was considered as definitely indicating the presence of diabetes; but diabetes could not be excluded if definite clinical evidence existed when other types of curve were found. A quick fall after the peak of the curve and hypoglycæmia while fasting (0·08% or thereabouts) were found in lesions of the lower motor neurone, in Addison's disease and in *myasthenia gravis*. A similar curve was found in six out of thirty-five healthy subjects. Five patients with glycosuria were studied and it was concluded that glycosuria is of no consequence provided the blood sugar curve is normal or similar to Curve III. In suspected pituitary disorders there was a tendency to a high peak and a slow fall, irrespective of the supposed nature of the pituitary lesion. A normal curve should be regarded as evidence against the existence of a pituitary lesion.

Diphtheria Prophylaxis in Asthmatic Patients.

G. L. WALDBOTT (*The Journal of the American Medical Association*, January 28, 1928) reports that in the cases of six asthmatic children who had been free from characteristic symptoms for several months, recurrences of the attacks took place after the administration of toxin-antitoxin. In two other children with an allergic family history no asthmatic attacks had ever occurred prior to the injec-

tion of toxin-antitoxin. The symptoms in all the patients were of a very severe type and extremely difficult to control by the usual therapeutic measures. The results of skin tests with horse-serum were strongly positive and definite eosinophilia was found on examination of the blood and this was more pronounced after than before the injections were given. It seems possible that small desensitizing doses of serum may prevent untoward symptoms from appearing in allergic patients.

Ephedrin in the Treatment of Bronchial Asthma in Children.

G. F. MUNNS AND C. A. ALDRICH (*The Journal of the American Medical Association*, April 16, 1927) have treated twenty-two asthmatic children with ephedrin administered orally. The minimum dose was twelve milligrammes, the maximum fifty. Sometimes the drug was given at four-hour intervals, in other cases as indicated only. The relief resulting from the treatment lasted sometimes as long as twenty-four hours and seldom less than four hours. In twelve cases patients with severe paroxysmal coughs were improved within thirty to forty-five minutes. Only four patients were relieved by a first dose and in six the drug seemed to be without any beneficial effect. In four cases severe nausea appeared. The authors conclude, however, that ephedrin is a remedy of value, especially in the milder cases and is useful in controlling cough.

Hypertension of the Pulmonary Circulation.

E. MOSCHOWITZ (*The American Journal of the Medical Sciences*, September, 1927) states that an increase of pressure in the pulmonary circulation cannot be measured, but is caused by any lesion which increases the peripheral resistance in that circulation. It is recognized by breathlessness, cyanosis, engorgement of the veins, accentuation of the second sound in the pulmonary area, dilatation and hypertrophy of the right heart, enlargement of the liver and infarction of the lungs. Pulmonary œdema has definite relations to pulmonary hypertension and may cause or follow it.

A New Test Meal.

BEING dissatisfied with the usual formulæ for test meals, O. and H. Madariaga (*Vida Nueva*, July 15, 1927) made trial of a number of new substances. The ideal they sought was a formula of a mixture which might easily be prepared in the consulting room of the medical practitioner, a mixture of low cost, of agreeable taste, of the colour of some everyday food, with an aromatic odour, easy to take for those with lowered power of mastication, of a balanced nature and one which when once ingested would be capable of easy extraction from the stomach. They also thought the mixture should be one which would not prevent the discernment of blood, bile, food fragments *et cetera* in the samples taken. The result of their search is the following formula. They heat two hundred and fifty cubic centimetres of distilled water to 45° or 50° C.; in this are dissolved five grammes of commercial milk powder. This is sweetened with five drops of vanilla and with fifteen grammes of white sugar. The authors pass an Einhorn's duodenal sound with perforations near its end, whilst the patient is fasting. With the patient in various postures they aspirate some of the contents of the fasting stomach with a twenty cubic centimetre syringe and examine the fluid so obtained. In some cases they wash out the stomach with distilled water. The meal is then given and the patient encouraged to converse and to walk about. Samples are aspirated with the syringe at intervals of three minutes, sixty minutes and ninety minutes. The investigators have found this the most physiologically correct of the test meals which they have used. It contains the necessary physico-chemical excitants, it is administered in about the same amount as the normal breakfast of the community. The technique employed enables the patient to behave as under the normal conditions of his life and the samples can be withdrawn during the ordinary hours of the clinic.

Pulmonary Tuberculosis from a Cuban Point of View.

PULMONARY tuberculosis, according to L. Ortega y Bolanos (*Vida Nueva*, May, 1927), is of such serious extent in Cuba as to threaten the very existence of the nation as a separate entity. The persons who die annually, are equivalent in number to the population of a large town. Statistics quoted show that in about four years nearly one thousand five hundred young persons between the ages of nineteen and twenty-five years have succumbed to the malady. The author draws attention to the enormous social and economic advantages which would have accrued had these young lives been lengthened for another quarter of a century. He deplores the lack of organization between the various bodies conducting the anti-tuberculosis campaign and the general practitioners of the country. In view of the seriousness of the ravages of the disorder he lays stress on the importance of the general practitioner gaining a working, practical conception of the disease in its various stages and manifestations and on the necessity of keeping up to date. The haziness of the knowledge of many medical practitioners when brought face to face with a patient and consequent uncertainty as regards the line of treatment to be adopted, lead to an absolute empiricism in treatment which often loses for a patient the chance of recovery. Older (anatomical) conceptions of pulmonary tuberculosis, as put forth by Virchow, have given place to physiological or physio-pathological conceptions. This tends to centre attention on the patient rather than upon the disease. The author favours the three phase conception of the development of tuberculosis, as put forward by German investigators represented by Ranke. This serves as a guide in establishing a classification based on all elements, clinical, anatomical, radiological, constitutional *et cetera*. With regard to reactions of the body leading to cure of the disease, the author mentions reabsorption of the products of inflammation and bacillary products, bacteriolysis and phagocytosis. Fibrous transformation is seen in some instances. Sometimes this fibrous formation results in a cicatrix which is visible radiologically, sometimes fibrous tissue is formed around cavities. The fate of cavities is discussed and a clinical picture is drawn of cure by retraction of the lung and displacement of the mediastinum. The author attaches little value to calcification and deprecates therapeutics which aim at cure based on this conception.

The Preventorium.

G. POIX (*La Presse Médicale*, September 21, 1927) gives an account of the function of preventoriums in France. The origin of the name is due to Calmette, who started the first in the year 1901 at Lille. This and others which grew up later, have now become the modern anti-tuberculosis dispensaries. It was not until the year 1922 that their present position became clearly defined, when the strict definition of Dr. Léon Bernard was accepted by the first International Congress of Open Air Schools. According to this preventoriums are "establishments in the country for children suffering from non-pulmonary tuberculosis in an early or latent stage, who are non-infectious and curable." There they are given a special *régime*, dietetic and hygienic, with continual fresh air and a combination of rest, education and physical culture under the combined care of a physician and a school teacher. Thus they differ from the open air school of cities for children who are contacts of tuberculous parents and who are under the guidance of their teacher only. There are 145 preventoriums in France, accommodating 10,800 children. To justify its right to the title, the author maintains that the preventorium must adhere to strict routine and the children must remain continuously. He also stipulates a minimum of fifty children, the cost of teachers as well as of a physician being too high to allow of any smaller number. Most of the children are recruited through the school medical officers who refer them to the dispensaries. If medical examination there proves satisfactory, they await a vacancy. Elaborate precautions are taken to exclude children with any contagious disease and to isolate any who may be in the incubation stage of an infectious disease. Particular care is taken to teach the children cleanly habits. They wear a minimum of clothes, have meals in the open air and sleep with windows always open. The day is occupied with lessons,

games, gymnasium, sun baking and domestic duties. Cod liver oil in summer and syrup of iron iodide in winter are practically the only medicines given. Once a fortnight each child is examined in minute detail, all results being carefully noted. Once a month a report is sent to their family. The minimum stay is from four to six months. Their discharge is dependent not only on their own state of health, but on a satisfactory report from the dispensary on their home conditions. The results are evidenced by the cure of the disease and a great improvement of the child, not only in physique, but in morale and character. The author complains that despite these good results no financial aid for the preventoriums is forthcoming from the State and he demands that they be considered as being of fundamental importance in the antituberculosis campaign.

Pulmonary Tuberculosis in Laboratory Animals.

GABRIEL PETIT AND LUCIEN PANISSET (*La Presse Médicale*, December 14, 1927) claim to have reproduced for the first time in laboratory animals a type of pulmonary tuberculosis which has hitherto been found exclusively in human beings. After stating that methods such as subcutaneous or intravenous injection or even inhalation of tubercle bacilli have failed to produce pulmonary tuberculosis comparable to that found clinically, they give details of their endobronchial method of implanting tubercle bacilli in the parenchyma of the lung. Tracheotomy is performed and a ureteric catheter introduced through a bronchus of the anæsthetized animal till resistance is felt, indicating its presence in a small bronchiole. Then with a syringe several cubic centimetres of a virulent emulsion of tubercle bacilli and other organisms are slowly injected; this is followed by normal serum to wash out the catheter and syringe and to give accurate dosage. Narcosis for twenty-four hours insures prolonged contact of the bacilli with the pulmonary tissues. In dogs they were able to demonstrate *post mortem* caseous pneumonia and cavitation. No trace of tuberculosis was found in any other organs, even the mediastinal glands escaping. During the three months between experiment and autopsy the animals lost considerable weight, they gave a reaction to a subcutaneous injection of tuberculin and a positive response to the complement fixation test, but no clinical signs were noted in the lungs. Four horses were also subjected to endobronchial implantation of tubercle bacilli, of which three were still surviving and apparently well when the author wrote. The fourth, after exhibiting typical clinical signs in the chest, died in fifteen months. Similar changes to those in the dogs were found *post mortem* except that the tracheobronchial glands were matted and caseous. The resistance of the three remaining animals is held to suggest interesting possibilities in connexion with research which is now taking place, on the properties acquired by blood plasma and serum during chronic pulmonary tuberculosis.

Heredity in Tuberculosis.

STÉFAN STERLING-OKUNIEWSKI (*Revue de la Tuberculose*, December, 1927) has analysed recent bacteriological researches by the French school on the possibility of transmission of a tuberculous virus from one generation to another and of hereditary sensitivity or immunity to tuberculous infection. He emphasizes the great importance of their discoveries in that they will profoundly modify the ætiological conception of tuberculosis in the future. It has been proved, he states, that a morphological variant of the classical tubercle bacillus of Koch is a filter-passing virus. Inoculation of this filtrate has resulted in definite tuberculosis in animals, while the virus has been shown experimentally to pass through the placenta with consequent tuberculous infection of the fœtus. Signs of degeneration in the parent from chronic toxæmia can be transmitted through several generations. The author maintains, therefore, that from the degenerative action of tuberculosis on the parent two alternative hereditary traits may be transmitted: either positively a greater resistance or negatively a greater susceptibility to tuberculous infection. Future research will have to determine the relationship between these two factors, virus and diathesis. The author raises the question as to whether this virus can infect all fœtuses or only those who are susceptible to tuberculosis. He also asks whether the fœtus, endowed with greater resistance, would not be better able to withstand this infection and still more the reinfections of the future. In the absence of exact knowledge of these factors, he utters a warning against any change of front in the campaign against tuberculosis.

Epilepsy.

AN unpublished lecture from "*Les Travaux et Memoires de Professeur Pierre Marie*" dealing with some considerations on the ætiology and treatment of epilepsy appeared in *La Presse Médicale* of January 21, 1928. In 1927 Marie reaffirmed his views on this subject, originally published in 1887. He believed that, contrary to the generally accepted ideas, epilepsy is not a neurosis, that it is always symptomatic of a lesion of the brain, that it is not hereditary, but is generally due to infantile infections or cranial injury at birth. Asphyxia at birth plays a large part in its causation. These accidents lead to either gross or minute lesions of the brain which later determine the attacks of epilepsy in children. In adults injury to the skull and divers lesions of the brain and meninges may be the cause of epilepsy; so also may lesions of the optic, auditory and olfactory nerves. Puerperal eclampsia gives rise to epilepsy by causing minute lesions of the brain; the prognosis in this type is often less serious than in other varieties. Senile epilepsy is the result of minute lesions of the brain, due to disintegration and to disturbances of cerebral nutrition dependent on age. Alcoholism and lesions of the eye, ear, nose and throat are probable causes of senile epilepsy. The familial and apparent hereditary occurrence of epilepsy is explicable on the grounds that cranial injury and asphyxia naturally occur in several members of the family whose mother has a small pelvis, and that epilepsy is most frequent among the poorer classes where the children are ill tended and exposed to all infections of infancy. In treatment phenyl-ethyl-malonyl-urea ("Luminal"-"Gardenal") and boracic acid, sodium borate or borax were found most useful until 1920, when *potassii-boro-tartras* was used. In children the latter drug is used alone; if results are not satisfactory "Gardenal" is employed also. In adults "Gardenal" is given in doses of ten centigrammes every second day and the tartrate in doses of one gramme three times a day before meals. The tartrate is made up in powder form, three grammes in small glass tubes sealed with paraffin. This dose is dissolved each morning in one hundred and twenty grammes of water and one-third of this amount, forty grammes, is taken as above. An erythematous rash occurs but rarely; it is relieved by withholding the tartrate for three or four weeks. Bigwood, of Brussels, has described an alkalosis coinciding with the convulsions in epilepsy and he believes that the tartaric acid liberated when the tartrate reaches the gastric juice, diminishes this alkalosis and benefits epilepsy in this way. "Gardenal" may be given in doses of ten centigrammes every day or even ten centigrammes three times a day, if smaller doses are unsuccessful. In epilepsy occurring about the time of the menstrual period, ten centigrammes are given daily for three days before, during and three days after the period; between the periods ten centigrammes are given every second day. The single dose of "Gardenal" is best taken half an hour before bedtime with a small cup of tea to aid absorption.

Basal Blood Pressure.

F. N. MILLER AND W. OSBORNE (*Annals of Internal Medicine*, October, 1927) discuss the significance of high blood pressure and of blood pressure after exercise. Ehrstrom analysed twenty cases in which a blood pressure constantly of two hundred or more millimetres of mercury existed and found that for ten to sixteen years good health and ability to work were frequent. He found that the chances in three hundred patients were even as to whether or not high blood pressure shortened life. Sladen and Johnson estimated blood pressure under conditions similar to those for the estimation of basal metabolism. Immediately afterwards a simple exercise was performed and systolic blood pressure was estimated at half-minute intervals. A high rise and quick fall of blood

pressure were regarded as favourable, whereas a slight rise and gradual return to basal rate were considered of bad prognostic import. In this study twenty-eight men and thirty-two women were tested, university students in good health. Blood pressure was estimated after a night's rest and then the subjects ran up and down a flight of seventeen steps, blood pressure estimation being made subsequently every half minute. Both systolic and diastolic pressure were noted. The variations in the response were so great that it was doubtful whether the test could be of much clinical value. The systolic pressure in 7% was less immediately after the exercise than before, in 18% it was not increased and in 75% it rose three to twenty-one millimetres of mercury. In the latter the pressure fell rapidly and then gradually came below the basal figures. The diastolic pressure was unchanged in 43%, rose in 17% and fell in 40%. The most constant change was a rise in pulse pressure immediately after exercise in 87% of cases.

Atherosclerosis.

S. SHAPIRO (*Endocrinology*, July-August, 1927) discusses the relation of certain glands of internal secretion to the development of atherosclerosis. In this condition the initial changes consist of a deposition of fatty substances (chiefly cholesterol and its esters) in the *intima*, splitting of elastic fibres, appearance of fibroblasts and formation of connective tissue. These changes are due to excess of cholesterol in the blood. Rabbits were fed with four grammes of lanoline daily in addition to ordinary diet. The group of normal rabbits developed early atheroma after one hundred and ten days of lanoline feeding. Rabbits whose thyreoids had been removed, gave evidence of moderate atherosclerosis after forty to fifty days. Animals whose spleens and gonads had been removed, gave evidence of early and moderate atherosclerosis. Rabbits which had been deprived of their suprarenal bodies, manifested little or no atheroma after one hundred and ten days. In all cases only parts of the glands were removed. It was also found that animals fed on cotton seed oil developed thyreoid hyperplasia and hypercholesterolæmia, deficiency in thyroxine being the cause of the latter. The conclusion is that deficiency of thyreoid, of spleen or of gonad activity induces atherosclerosis following hypercholesterolæmia. Suprarenal insufficiency, on the other hand, does not cause either condition.

Gastric Tonus.

V. LAPICCIRELLA (*La Presse Médicale*, December 7, 1927) records some studies on the action of certain drugs on the tonus of the muscular coat of the stomach. Gaultier's gastrotonometer was used to estimate gastric tonus. The stomach was first emptied by Einhorn's tube. The pulse rates, arterial tension and stomach tonus were then noted. The substance to be tested was injected intramuscularly and observations were made at frequent intervals; the gastric tonus was estimated thirty and sixty minutes afterwards. Adrenalin and pilocarpine had no effect on tonus, atropine in small doses had a moderate and immediate tonic effect. Strychnine had a similar action and histamine had no action. Extract of the posterior lobe of the pituitary caused a definite increase of gastric tonus, associated with sensations of hunger and rapid emptying as seen by radiological observation. Gastric secretion was also studied by withdrawing the gastric contents every ten minutes. Atropine decreased and adrenalin increased the secretion, while pilocarpine and histamine both caused an increase.

Epilepsia Tarda.

D. RIESMAN AND T. FITZ-HUGH (*The Annals of Clinical Medicine*, November, 1927) record twelve cases of *epilepsia tarda* and discuss the causation. The condition, also called senile epilepsy, occurred between the ages of forty-one and seventy-three in the twelve patients. All the patients suffered from some form of epileptiform convulsions which were typical, except that there was no initial cry; *petit mal* was noted in two instances. Attacks were both nocturnal and diurnal. All patients gave evidence of some circulatory abnormality, either cardiac hypertrophy and myocardial degeneration or systolic apical murmurs. Ten patients gave evidence of arteriosclerosis, seven had signs of hypertension. The attacks were thought to depend on circulatory disorder of the types mentioned. Treatment should be directed to the underlying circulatory defect. Prognosis is variable and difficult. Diagnosis depends on the exclusion of other causes of convulsions; uræmia is regarded as a rare cause.

Liver Extract.

J. C. BURNETT (*Endocrinology*, July-August, 1927) discusses the depressor substance in liver extract. Fresh liver was ground up and extracted with alcohol. The proteins were removed from some preparations and not from others. Intravenous injections into dogs showed that the protein-containing preparations caused a definite fall in blood pressure, whereas those not containing protein were inert. No specific autocoid which caused a fall in blood pressure, was discovered in the liver. It was found that the physiological effects of liver extract and of histamine were identical in all ways in which they were tested. It is probable that the depressor substance in liver extract is histamine or histamine and choline.

"Sanocrysin" in Pulmonary Tuberculosis.

FREDERICK HEAF (*Tubercle*, December, 1927) gives the result of treatment with "Sanocrysin" of fifty patients with open pulmonary tuberculosis, twenty of whom had been treated more than twelve months previously. The tuberculosis of sixteen was clinically arrested and of these ten had completed treatment more than twelve months previously. Twelve were classified as improved and had not relapsed; five had improved, but relapsed. Seventeen did not improve or became worse, while five died. Of these latter, four had symptoms of tuberculous peritonitis and it is concluded that this complication is a definite contraindication to "Sanocrysin" treatment. Four children were treated and three manifested definite improvement. The most successful results were obtained in seven patients with bilateral tuberculosis who were treated by artificial pneumothorax and "Sanocrysin"; six of these showed remarkable improvement. From the experience gained the author draws several conclusions: (i) Only a small percentage of patients are suitable for treatment with "Sanocrysin" and routine or collapse therapy should be tried before it is used. (ii) The degree of arrest obtained in the patients who improved under "Sanocrysin," was sufficiently permanent to be regarded as very encouraging. (iii) The most constant successes have been obtained in supplementing collapse therapy with "Sanocrysin" treatment.

"Plasmochin" in Malaria.

SIOLI, in Düsseldorf, discovered that "Plasmochin" was effective in curing attacks of malaria produced by inoculation. W. Roehl (*Boletin Tecnico de la Direccion General de Sanidad*, September, 1927) gives the results of his experiments with the same substance in tertian and tropical malaria. In the first experiments doses of 0·15 gramme were used daily. This dosage had definite beneficial effect on both tertian and tropical malaria. The ill effects of the drug noticed were slight and included lividity of the lips, pallor, slight pains in the stomach and side, lassitude. Experiments were next made to find out how far the dose could be reduced without invalidating the therapeutic effect. A dose of 0·05 gramme was found effective in tertian ague and in a few instances 0·025 gramme. The treatment of one patient was interrupted and the patient relapsed. A fresh and longer course resulted in cure. In tropical malaria, caused by *Plasmodium falciparum*, the treatment was equally efficacious, the gametes being made to disappear from the blood at the end of ninety-six hours at the most. This result is very difficult to obtain even with a long course of quinine medication. It seems probable that a larger dose is necessary in treating patients with the tropical than in treating those with the tertian type. Indications point to the desirability of combining quinine with the "Plasmochin" in the latter type of malaria. The patients in this series of observations numbered only twenty and circumstances prevented their being followed up after their discharge from hospital.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Parkside Mental Hospital, Adelaide, on March 29, 1928, DR. R. H. PULLEINE, the President, in the chair.

Dementia Præcox.

DR. M. H. DOWNEY read a paper entitled: "Dementia Præcox" (see page 540).

DR. A. JAMIESON MEIKLE showed a young woman who had been admitted to hospital two and a half years previously at the age of twenty years. She had been ill for two years before admission. According to the history she had been quite normal until she reached her eighteenth year. A gradual change of disposition had then set in. At times she had become excited, abusive and violent without any apparent cause. At other times she had been shy and seclusive. As far as was known the family history was good. On admission the patient had been slightly anæmic. No organic disease had been present and there had been no stigmata of degeneration. She had answered questions rationally, but in an offhand manner. Her attention had been weak and she had been quite indifferent to her surroundings; she had been in no way upset at being in the mental hospital. She had been able to give no reason for her impulsive violent outbursts. She had had no hallucinations and no mannerisms nor attitudes.

At the time of the meeting the patient was mostly shy and seclusive. At times, however, she was very rude and impulsive for no apparent reason. She was indifferent, she did not ask to be allowed to go home, she made no inquiries about her parents. She took no interest in her surroundings and appeared to live in the land of unreality. Although she had been in the hospital for about two and a half years, she did not know the names of any of the nurses or patients. She did some work in the laundry, but did it inefficiently, she took no interest in it and lacked initiative. She was extremely vain and exhibited verbigeration. Her memory was becoming impaired and mental deterioration was increasing. The prognosis was bad. The diagnosis had been made largely on the conduct.

The second patient shown by Dr. Meikle was a young woman who had been admitted in October, 1927, at the age of twenty-five years. The symptoms had been of about two years duration. The onset, as in the first patient, had been insidious and marked by a progressive change in disposition. This patient had been quite normal up to the age of twenty-three years, she had been an active, hard-working, intelligent and affectionate young woman. She had been healthy, the family history was good and no stigmata of degeneration had been present.

At the time of the meeting the patient was peculiarly childish with a tendency to silly giggling and to unprovoked outbursts of excitement and violence. She was indolent and could not be induced to work. She stated that she had "no time for" her relatives as they had her "set." She had definite hallucinations of hearing and these were probably the cause of her ideas of persecution. She was destructive and lately had stripped herself naked in the airing court. She was irresponsible and treated everything as a joke. At her mother's request she had been granted trial leave, but after two days she had been readmitted, as she had been quite unmanageable at home. Dr. Meikle said that this patient presented no attitudes or mannerisms. There was no clouding of consciousness and the condition was diagnosed as *dementia præcox paranoides*.

The third patient shown by Dr. Meikle was a woman, aged thirty-five years, who was suffering from *dementia præcox paranoides*. The duration of her illness had been at least five years. She had been admitted in January, 1928. Her physical condition had been moderately good, no organic disease had been detected and no stigmata of degeneration. Her memory, orientation, cognition and recognition had been correct, but her attention poor. She had had hallucinations of hearing and exalted and grandiose delusions with ideas of persecution chiefly relating to her husband and mother. At the time of the meeting she was extremely haughty and inclined to be hostile. She did no work of any kind. She spoke in a somewhat affected manner, but otherwise exhibited no mannerisms, attitudes or negativism. At times her conversation was rambling, disconnected and incoherent in keeping with her utterly bizarre delusions.

DR. H. M. DOWNEY showed a patient, aged thirty years, who had been admitted to hospital on September 9, 1926, during an attack which had lasted for twelve months. The illness of the patient was of the catatonic type. He had a high, narrow palate. There was a history of auditory hallucinations, vague delusions of persecution, depression, mutism, catatonia, antics, negativism and impulsiveness.

Dr. Downey also showed a patient, aged twenty-three years, who had been admitted to hospital on October 29, 1926, suffering from an attack which had lasted for two years. The dementia had been of a catatonic type, stigmata of degeneration had been present and the patient suffered from an infantile type of uterus. There was a history of auditory hallucinations, loss of interest, mutism, mannerisms, catatonia and negativism.

Dr. Downey's next patient had been admitted to hospital on August 24, 1926, at the age of twenty-four years, during an attack of a paranoid type which had lasted for two years. There was a history of loss of energy and interest, a refusal on the part of the patient to occupy himself, delusions of persecution, hostility, suspicion, impulsiveness and copralalia.

Dr. Downey also showed eight other patients suffering from *dementia præcox* to illustrate especially the following signs: echopraxia, catatonic attitudes, *flexibilitas cerea*, mannerisms, negativism, pseudographia and pseudolalia.

Insanity Following Hysterectomy.

DR. O. MOULDEN reported a case of insanity following hysterectomy.

Bilateral Massive Hæmorrhages into the Suprarenals.

PROFESSOR J. BURTON CLELAND recorded the history of a married woman, aged seventy-two years, who had been admitted to the Parkside Mental Hospital on August 17, 1925, suffering from senile dementia. She had been in a filthy condition on admission and had had an attack of *petit mal* on being washed. She had been sleepless, had wandered about her room and had had suicidal tendencies. She had been discharged ten days later on trial leave, but had been readmitted on February 7, 1926. Since then she had maintained moderately good health, but had fallen several times and had sustained scalp wounds and abrasions. On May 2, 1927, at 8.35 a.m., she had collapsed in the airing court and when seen by the medical officer had been cyanosed about the lips, face and hands with an almost impalpable pulse and respirations short, rapid and laboured. The heart sounds had been very distant and hard to hear. The lungs had been full of moist sounds. She had died one and a quarter hours after the collapse.

At the autopsy both suprarenal glands had been found enlarged and hæmorrhagic. The right kidney had been affected by pyonephrosis and very little functioning renal substance was left. There was a little emphysema in the lungs. There were only traces of atheroma in the thoracic aorta, a little more extensive in the abdominal aorta. The heart was small with no valvular lesions. The brain contained no obvious lesions.

Microscopical examination revealed an extensive hæmorrhagic necrosis of the gland which was completely disorganized. In another section much degeneration with fibrosis was seen. Microscopical examination of the lungs revealed some organizing exudate in the alveoli.

Professor Cleland said that the cause of the collapse and death in this case seemed clearly to have been the hæmorrhagic destruction of both suprarenal glands. Why this should have occurred did not seem at all clear. The destruction of both glands by independent hæmorrhages would suggest that the cause was some general one such as anaphylaxis and not a local one due to some vulnerability of the vessel walls.

Unsuspected Pituitary Tumour.

Professor Cleland described the history of a male, aged sixty-one years, who had been admitted to the Parkside Mental Hospital on March 25, 1897, with a diagnosis of acute mania. In September, 1899, he had mutilated himself by amputation of the penis at the level of the scrotum and had been admitted to the Adelaide Hospital for a few days. There after he had enjoyed moderately good health until his final illness, although he had become very demented. On February 20, 1928, he had had a slight rise of temperature and had been sent to bed. On February 22 he had had a slight hæmoptysis and he had died rather suddenly on February 25.

Professor Cleland said that death had been due to rupture of a false aneurysm in the descending aorta into the left pleura which contained more than three litres (five pints) of blood. As a result of combined syphilitic aortitis and atheroma a portion of the wall had yielded and rupture had occurred eventually. In removing the brain a walnut-sized tumour 2·5 centimetres (one inch) in diameter, rounded and very soft, had been found adherent to the *dura mater* in an enlarged *sella turica*. It was of a pale, fleshy yellow colour. The patient's lower jaw, hands and feet were not apparently unusually large. There were no other lesions of moment. Although the patient had been more or less demented, there was nothing in the history indicating what effects, if any, this tumour had had. Microscopically it was adenomatous.

A MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on April 12, 1928, DR. J. E. V. BARLING, the President, in the chair.

Plastic Surgery.

DR. H. P. PICKERILL read a paper entitled: "Facial Paralysis, Palatal Repair and Some Other Plastic Restorations" (see page 543).

Dr. Pickerill illustrated his remarks by a series of photographs of patients, illustrating the various stages of operation. He also showed a series of lantern slides dealing with the same subject. He demonstrated the incisions for the fashioning of tube grafts on a wax model and concluded by showing a cinematograph film depicting the results of operation for facial paralysis.

DR. ARCHIE ASPINALL congratulated Dr. Pickerill on the splendid series of pictures which he had shown. He realized that Dr. Pickerill was an expert at his work. He thought that success in plastic surgery was dependent not only on a thorough knowledge of the subject, but also on having experience in the making of splints and on proper nursing. The latter was most important. One difficulty in connexion with the treatment in civil practice lay in the fact that medical superintendents were always anxious that the patient should not stay too long in hospital. He was interested in the long tube grafts made by Dr. Pickerill and he realized that some of his failures were due to the fact that the grafts were not wide enough. Dr. Aspinall asked how Dr. Pickerill got pressure for Thiersch grafts in the mouth, he presumed it was by means of pressure from a splint. He also inquired whether Dr. Pickerill used whole skin for skin grafting the forehead and how he maintained pressure.

DR. P. L. HIPSLEY congratulated Dr. Pickerill on his interesting and instructive paper. He was interested more particularly in the subject of cleft palate and had come to the conclusion that a modified Brophy operation was the best in the majority of cases. He had tried the complete Brophy, but had abandoned its use. He noticed that Brophy performed his operation in older children, even on those up to six months of age; he also left the wire in position for a long time. He did not operate on babies which weighed under nine pounds. This was the main trouble. The babies were poorly nourished and people were not educated up to the fact that the milk supply could be preserved by drawing the milk off regularly. It was his custom to send the mothers to "Tresillian" Hospital to have the milk supply established, for after this was done, the children stood the operation better. He was also interested in the method of grafting the palate. He had read Dr. Pickerill's book, but he had not found the description very clear. He asked which part of the body was the best for the obtaining of a graft and wished to know whether a piece of aluminium would do as well as a piece of pewter as a splint for the graft. The operation for hypospadias was always difficult and he asked what precautions Dr. Pickerill used in regard to hair follicles in the graft.

DR. D. J. GLISSAN asked whether Dr. Pickerill used the pedicle graft or whether he always relied on the tube graft. He had had experience of grafting an old ulcer on a leg by means of a pedicle graft and did not think that in that particular case a tube graft could have given a better result. He thought that the ordinary wire used by electricians for electric installations made an excellent splint for facial paralysis. The wire was surrounded by India rubber and fabric and was in every way suitable when the fabric was stripped off. He had been filled with wonder at the methods of juggling with the skin used by Dr. Pickerill and was grateful to him for his exposition.

Dr. Pickerill in reply thanked those present for the way in which they had received his paper. He agreed with Dr. Aspinall that a great deal depended on the nursing. Some nurses had no mechanical sense, they allowed the tube to become kinked while the patient was asleep and the blood supply was interrupted. Surgeons in Sydney did not have to contend with the climatic difficulties which he had experienced in New Zealand. The sudden alterations in temperature were troublesome. He had lost at least a part of one nose in this way; the day had been warm and at night a cold change had set in and the graft had become frost bitten. Much of this difficulty could be overcome by careful nursing. He hoped that he had not given the impression that he despised the old Langenbeck operation; he thought that it was very useful, but it was necessary to use it only in selected cases.

In regard to pressure for skin grafts in the mouth, if the area on which pressure was required was situated in the buccal sulcus, Stent attached to a denture would be suitable; otherwise a splint might be made and attached to a tooth or fixed by a screw. It did not matter how the pressure was obtained, so long as it was kept up without movement for a week or ten days. In regard to grafts of the forehead he used a whole thickness graft and had at first used Stent's dental composition and believed he was the first to do so. It was important that the material providing the pressure should not move, there should be no slipping. After using Stent's material he had tried wax, but this had not been satisfactory and he had reverted to Stent's material. With a rubber sponge the pressure was apt to become uneven. It was always important to have a foundation on which to press. If pressure were required on the cheek, it was necessary to use a splint in the mouth.

He was glad to know that Dr. Hipsley used the modified Brophy operation. He did not know that Brophy used his operation on children at the age of six months. If this was so, he thought that it would be necessary to do a lot of bone cutting or fracturing. At the same time it was Brophy's own operation and he probably used expedients which were unknown to others. He regretted that Dr. Hipsley had not found his book clear. He blamed the publisher, for publishers always insisted on cutting down the letterpress to suit the price. He took the graft for the palate from the anterior surface of the arm overlying the biceps muscle. He thought that aluminium would be too hard. Pewter was thin, but was apt to become harsh. He was looking for another material. Rubber would not do, but sterile leather might possibly be suitable.

It was necessary that the flap used for the cure of hypospadias should be free from hair. In the case described by him he had obtained the graft from the side of the abdomen and had swung it down in two stages. He had obtained the lining from the fringes which resulted from previous operations. Had these fringes not been available, he would have applied a Thiersch skin graft to the under surface of the flap before bringing it down.

In regard to the pedicle grafts, these could be used in suitable situations. It was possible, however, to keep a tube graft much cleaner and free from infection. By means of a tube graft it was also possible to cover a greater distance.

MEDICO-POLITICAL.

MEETING OF THE FEDERAL COMMITTEE.

A MEETING OF THE FEDERAL COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION IN AUSTRALIA was held on April 4 and 5, 1928, at the Medical Society Hall, East Melbourne. Owing to the delayed arrival of the train from Canberra the meeting was begun on April 4 in the absence of the Chairman, Sir George Syme, and four other members of the Committee. Dr. Gregory Sprott was elected to the chair; on April 5 Sir George Syme took the chair.

Representatives.

The following representatives of the Branches were present:

New South Wales Branch: Dr. R. H. Todd, Dr. J. Adam Dick, C.M.G.
Victorian Branch: Sir George A. Syme, K.B.E., Dr. R. H. Fetherston.
Queensland Branch: Dr. W. N. Robertson, C.B.E., Dr. E. Sandford Jackson.
South Australian Branch: Dr. H. S. Newland, C.B.E., D.S.O., Dr. Bronte Smeaton.
Western Australian Branch: Dr. F. A. Hadley.
Tasmanian Branch: Dr. Gregory Sprott, Dr. E. Brettingham Moore.

Apology for non-attendance was received from Dr. D. D. Paton representing the Western Australian Branch. Dr. Paton appointed Dr. R. H. Todd to act as proxy.

Financial Statement.

The statements of receipts and payments of the Committee and of the Australasian Medical Congress (British Medical Association) Accumulated Funds Account were received and adopted. It was resolved that the statements be published in THE MEDICAL JOURNAL OF AUSTRALIA.

Appointment of Office-Bearers.

The following were elected office-bearers for the ensuing year:

Chairman: Sir George A. Syme, K.B.E.
Vice-Chairman: Dr. W. N. Robertson, C.B.E.
Honorary Secretary and Treasurer: Dr. R. H. Todd.

Dr. W. H. Crago was appointed the honorary auditor.

Federal Registration of Medical Practitioners.

A communication was read from Dr. J. H. L. Cumpston, as Chairman of the Federal Health Council, informing the Federal Committee that the Council had considered at its last meeting the advisability of instituting a single board in Australia for the registration of medical practitioners and had asked him to confer with the Federal Committee to ascertain the views of the medical profession on the matter.

It was ascertained that a scheme had not yet been formulated and that Dr. Cumpston was unable to meet the Committee during the session. After some discussion it was resolved:

(i) That it be a suggestion to the Director-General of Health that the Federal Government devise a scheme for giving effect to the recommendation of the Royal Commission on Health in regard to the registration of medical practitioners.

(ii) That he be asked, if possible, to let the Federal Committee have a scheme in time for its being brought to the notice of the Federal Committee at its next meeting about September.

Correspondence.

A letter was read from the Secretary of the Victorian Branch inquiring whether the Branch could elect its delegates at a date other than that prescribed. It was pointed out that the Branches determined by their own rules how and when they elected members to be members

FEDERAL COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION IN AUSTRALIA.

STATEMENT OF RECEIPTS AND PAYMENTS FOR SIX MONTHS ENDED DECEMBER 31, 1927.

RECEIPTS.	£ s. d.	£ s. d.
To Balance at June 30, 1927—		
Government Savings Bank of New South Wales	544 3 5	
Union Bank of Australia Ltd.	85 11 7	
Cash on Hand	0 11 6	
		630 6 6
„ Branch Contributions		363 3 0
		£993 9 6

PAYMENTS.	£ s. d.	£ s. d.
By Travelling Expenses		66 0 2
„ Sundry Expenses		56 17 2
„ Balance at December 31, 1927—		
Government Savings Bank of New South Wales	544 3 5	
Union Bank of Australia Ltd.	324 13 8	
Cash on Hand	1 15 1	
		870 12 2
		£993 9 6

AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION) ACCUMULATED FUNDS ACCOUNT.

RECEIPTS.	£ s. d.
To Balance at June 30, 1927—	
Government Savings Bank of New South Wales	484 17 10
	£484 17 10

PAYMENTS.	£ s. d.
By Australasian Medical Congress, Third Session, Sydney, 1929, Sundry Expenses	100 0 0
„ Clerical Assistance	11 5 0
„ Balance at December 31, 1927—	
Government Savings Bank of New South Wales	373 12 10
	£484 17 10

(Signed) ROBT. H. TODD,
Honorary Secretary.

Sydney, March 27, 1928.

Audited and found correct—
(Signed) W. H. CRAGO,
Honorary Auditor.

of the Federal Committee and that no specified times were prescribed by the regulations of the Federal Committee.

A further letter from the Victorian Branch was read intimating that the Council of the Branch was not in favour of publishing the names of candidates for election to the Branch in THE MEDICAL JOURNAL OF AUSTRALIA.

A further letter from the Victorian Branch was read inquiring whether the Federal Committee could not meet the expenses of both representatives of the Branch out of the Branch contributions. It was noted that if all the members of the Federal Committee attended the meetings, the funds of the Committee would be insufficient to defray the travelling expenses of both members. It was assumed that the Branches would not wish to increase the *per caput* contribution to the Federal Committee for the purpose. It was therefore resolved on the motion of Dr. Gregory Sprott, seconded by Dr. Bronte Smeaton:

> That inasmuch as the payment of expenses of both representatives of each Branch by the Federal Committee would necessitate an increase of the contribution by the Branches, the matter stand over at present.

Correspondence was read between the Honorary Secretary and the Chairman of the Federal Committee in which it was suggested that the Federal Government be urged to appoint a Royal Commission to investigate the cause of deaths that had taken place in Bundaberg after the injection of diphtheria toxin-antitoxin mixture.

A letter was read from the Australasian Pharmaceutical Conference conveying the following resolutions adopted recently by that body at Hobart:

> (i) That this Conference approach the Federal Committee of the British Medical Association with a request that consideration be given to the desirability of declaring it to be unethical for a medical man to dispense prescriptions in places where a pharmaceutical chemist is established.
>
> (ii) That the Conference on its part to agree to declare it unethical for a pharmaceutical chemist (*a*) to prescribe except for simple or minor ailments and (*b*) to use the title "consulting chemist" in connexion with his business.

It was resolved:

> (i) That the Federal Committee is of the opinion that the matter raised by the Australasian Pharmaceutical Conference could not be dealt with as a matter of ethics;
>
> (ii) That the present state of settlement in Australia does not admit of a general rule in the matter;
>
> (iii) That in the opinion of the Federal Committee the proposals of the Australasian Pharmaceutical Conference are impracticable.

Membership of Branches.

The Honorary Secretary reported that a letter had been sent to the Medical Secretary of the British Medical Association suggesting that Article 17 of the Articles of Association be amended so as to enable the Council of an overseas Branch to exercise its discretion in accepting a member of the Association as a member of that Branch when he moved from the area of another Branch. No reply had yet been received.

Proposed Medical Association of Australia.

DR. W. N. ROBERTSON moved on behalf of the Queensland Branch that a medical association of Australia be established with complete autonomy, affiliated with the British Medical Association, and with a constitution similar to that of the Medical Association of South Africa (British Medical Association). He stated that the proposal had been put forward as a remedy for the delays which arose as a result of the constitution of the Branches in Australia and of the Federal Committee.

DR. E. SANDFORD JACKSON prefaced his remarks by emphasizing that there was no desire to break away from the British Medical Association. They wished to have prompter business. By adopting the constitution of the South African body they might achieve their object. He contended that the Medical Association of South Africa was part of the British Medical Association.

DR. R. H. TODD reminded the Committee that the Queensland Branch had submitted a motion to the previous meeting of the Federal Committee and that the Branch had been asked to amplify its proposals. It had communicated with the several Branches. The Victorian Branch had asked the Federal Committee to establish a Federal body with executive powers. The Medical Association of South Africa (British Medical Association) had been formed as a result of the intervention of Dr. Alfred Cox, the Medical Secretary of the Association. The profession in South Africa had experienced difficulties owing to racial differences. Previously there had been two bodies and there had been much opposition to the adhesion to the British Medical Association. A compromise had been effected and a body similar to the parent Association in so far as the Memorandum of Association was concerned had been formed. It was not an integral part of the Association. Subscriptions were paid to the Central Council of the South African Association and the latter made grants and contributions to the Branches and Divisions. The Medical Association of South Africa as a whole was incorporated, but none of the Branches or Divisions were corporate bodies. Dr. Todd thought that it would be possible for a similar body to be established in Australia, but its constitution would be complicated by the fact that some of the Branches in Australia were corporate bodies. The Branches would have to alter their constitution and to surrender the special powers which they possessed under the By-Laws of the British Medical Association, including that of fixing the amount of subscription.

In reply to a question it was explained that the British Medical Association had given power to overseas Branches in Article 16 and By-Law 23 to form Federal Councils which could have executive powers to act for the Branches collectively. The powers of such a council would be determined by the interpretation of the wording of the article and by-law. It could be a corporate body. The procedure for the establishment of the Federal Council would be that the Branches would pass the necessary resolutions to form it. If a Federal Council were formed and were given executive powers, it would be necessary for it to have a secretariat with a full time secretary and the salary would have to be commensurate with the work and responsibilities. It would be essential to provide a substantial sum of money each year to maintain the secretariat. This would entail an increase in the subscription of members. He thought that few members realized the very large amount of work that was being done for them in all the Branches. This work in the past had resulted in a large increase in the amount of money paid to the profession and in a general safeguarding of the interests of medical practitioners. He moved:

> That steps be taken to form a Federal Council for the Branches in Australia in accordance with Article 16 and By-Law 23.
>
> *Article 16.*—Federal Councils representative of the Branches in any area outside the United Kingdom defined and approved by the Council may be formed in the manner and for the purposes specified in the By-Laws.
>
> *By-Law 23.*—(1) The Branches in any defined area outside the United Kingdom which shall be approved by the Council for the purpose may form a Federal Council consisting of members of the Association representing each of the Branches concerned for the purpose of carrying out the objects of the Association on behalf of those Branches collectively within the area so defined and approved. Subject as hereinafter provided any such Federal Council may be corporate or unincorporate.
>
> (2) Any proposal for the formation of any such Federal Council specifying the area in which the same is intended to act and its constitution, powers and duties shall be submitted

by the Branches concerned to the Council and no such proposal shall become operative unless and until the same shall have been approved by the Council.

(3) This By-Law shall apply to a corporate Branch subject and without prejudice to anything contained in the Memorandum and Articles of Association or other the instrument of foundation or regulations of such Branch.

The amendment was seconded by Dr. Gregory Sprott.

DR. R. H. FETHERSTON thought that they would be much freer under an association similar to that in South Africa. He contended that there was a very close link between the South African body and the British Medical Association. To give executive power to a Federal Council would not meet their requirements.

SIR GEORGE SYME spoke strongly against the establishment of a medical association of Australia. He held that the British Medical Association was a very strong bond of union in the Empire. Speaking as an Imperialist, he thought that they should do all in their power to strengthen that bond. The formation of a body outside the Association, even if it were affiliated with the Association, would weaken the bond. He was certain that there would be no difficulty in getting all they wanted within the Association. The Council would grant a Federal Council full executive power if they adopted the amendment. The name of the British Medical Association was of great value. Dr. Hayward and Dr. Todd had been instrumental in obtaining from the Central Council of the British Medical Association that measure of self-government which was so necessary for their independent existence. He was sure that the Central Council would grant any reasonable request to meet their present needs.

The amendment was carried and was adopted as a substantive resolution.

Meeting of the Medical Association of South Africa (British Medical Association.)

A letter was read from the Honorary Treasurer of the Medical Association of South Africa (British Medical Association) announcing that the first annual scientific and general meeting was to have been held from March 12 to March 17, 1928. The Federal Committee was invited to appoint delegates from the Branches to attend the meeting.

As the invitation had arrived at a time when it was difficult to arrange for delegates to travel to South Africa at short notice, it was resolved that the best thanks of the Federal Committee be sent to the Council and that its regrets be expressed that it had been unable to appoint delegates.

British Medical Association Scholarships and Grants.

One application for a British Medical Association grant by a member had been submitted in accordance with the arrangements that had been made with London. The correspondence and the documents were read and it was noted that the latter would be forwarded to the headquarters of the Association.

Model Rules Governing Procedure in Ethical Matters.

Model rules to govern procedure in ethical matters had been drafted by the Honorary Secretary in accordance with instructions given by the Federal Committee at its meeting of December 29, 1927. These rules had been drafted on the basis of the revised rules approved by the Representative Body of the British Medical Association in 1919 and had been adapted to the conditions obtaining in the Branches in Australia.

Dr. R. H. Todd explained that the model rules had been drafted in conformity with the model rules issued by the Association to the home Branches. He had been at pains to safeguard the Branches as far as this was possible. He suggested that if the Committee held that they were in conformity with the English rules, they could be adopted with safety. They should be sent to the Council of the Association for its information.

Various points in regard to the procedure were discussed and the rules were adopted.

Election of Members.

The Honorary Secretary reported that in accordance with the resolution of the Federal Committee a common letter had been sent to the several Branches in regard to the adoption of a *questionnaire* to be submitted to applicants for membership of the British Medical Association. Replies had been received from the Victorian Branch, the Western Australian Branch and the Tasmanian Branch approving of the proposal, from the South Australian Branch acknowledging the receipt of the letter and from the New South Wales Branch approving of the *questionnaire* in certain cases and pointing out that the rules of the Branch offered adequate protection.

Reservation of Site in the Federal Capital Territory for the Federal Committee.

The question of the reservation of a site in the area at Canberra reserved for scientific societies for use by the Federal Committee of the British Medical Association in Australia was discussed. A letter had been received from the Federal Capital Commission, dated December 14, 1927, in which the Federal Committee was asked to make a specific application and to indicate its proposals in regard to building. Reference was made to the application of the College of Surgeons of Australasia for a site. After some discussion it was resolved that a reply be sent to the Commission to the effect that the Federal Committee desired a site in Canberra in the area reserved for scientific bodies of half an acre on the same conditions as had been granted to the College of Surgeons of Australasia and adjoining the site allotted to the College of Surgeons of Australasia.

Medical Research Council.

DR. W. N. ROBERTSON moved:

> That the Federal Committee should approach the Prime Minister with a request that the Medical Research Council be established immediately in Australia; that the Council and its workers shall not be under the Public Service Regulations and that the personnel of the Council shall consist essentially of research men with parliamentary representation.

DR. E. SANDFORD JACKSON in seconding the motion, said that it was necessary to free research workers from interference and to allow them to conduct their work in the manner they held to be best.

Dr. R. H. Todd pointed out that there were no facts to support the motion. The Royal Commission on Health had recommended the establishment of a Medical Research Council and had indicated the desired composition of the Council. The same motion as had been placed on the business paper by the Queensland Branch had been sent to all the Branches. He moved as an amendment:

> That before any action be taken inquiries should be made as to the facts, if any, leading to the interference with the existing condition.

Dr. E. Sandford Jackson thought that the Queensland Branch motion was a good way of dealing with the matter. It was founded on what had been done in the old country. He did not think that it would serve any useful purpose to recite the facts that had induced him to move in the matter. The motion had the object of founding a council as good as any in the world. As long as research workers were not checked in their enthusiasm, he did not care which method was adopted. He would be prepared to accept the recommendation of the Royal Commission of Health provided that the research worker was protected. He spoke of one worker whose enthusiasm had been checked by interference and who had resigned his position in consequence.

Dr. F. A. Hadley thought that the Research Council should be free from political control.

Dr. Gregory Sprott said that the Tasmanian Branch desired the Federal Committee to take steps to see that the Research Council was free from political influence.

Sir George Syme stated that the members of the Committee had apparently forgotten the recommendation of the Royal Commission on Health. The Commission had suggested a health research council on which should be a representative of the Government who should be a business or financial authority appointed by the Governor-General in Council. The Director-General of Health should be a member *ex officio*. The other members should be one representative each of the Universities of Sydney, Melbourne and Adelaide, nominated by their respective Faculties of Medicine, three representatives of the medical profession nominated by the Federal Committee of the British Medical Association in Australia of whom one should be or have been engaged in research and a scientist nominated by the National Research Council. The members should be appointed for a period of five years. A sub-committee should be appointed in each State consisting of a member of the Research Council residing in that State and two members coopted by him and approved by the Council, to consider local researches and advise the Council concerning them. If no member of the Council were resident in any particular State, the Council should have the power to appoint a State sub-committee. The Commonwealth should provide a special appropriation or endowment of £30,000 a year in aid of health research. Sir George Syme pointed out that there was no suggestion of any political control. The medical profession would be in a majority. As the Government would supply the funds, it would be necessary for it to appoint a representative. He did not think that a council constituted in the manner indicated would be subject to the Public Service regulations.

Dr. F. A. Hadley said that he was prepared to withdraw his objections if Sir George Syme could assure him that there would be no political control of the research workers.

With the sanction of the meeting and of the seconder Dr. Robertson withdrew his motion. He moved in its stead:

> (i) That the Federal Committee recommend to the Federal Government that it proceed in the establishment of a Federal Research Council on the lines of the recommendation of the Royal Commission on Health with direct access to the Minister;
>
> (ii) That such Research Council should be free from the Public Service regulations.

DR. GREGORY SPROTT seconded the motion.

Sir George Syme said that the Branches had been asked to comment on the report of the Royal Commission. All the Branches had considered it and had sent in their replies. No recommendation of any kind had been put forward in regard to the matter of the Research Council.

Dr. Todd's amendment was put to the meeting and was lost. A further amendment that part (ii) of the motion be deleted, was also lost. Dr. Robertson's motion was carried.

Travelling Medical Examiners for Life Insurance Societies.

In continuation of the resolution of the Federal Committee (see THE MEDICAL JOURNAL OF AUSTRALIA, October 22, 1927, page 595) the Honorary Secretary had interviewed the Honorary Secretary of the Life Officers' Association of Australia and had discussed the matter of conditions and remunerations of travelling medical officers employed by life assurance societies. The latter had been unaware that arrangements were made by the agent with the travelling medical examiner. He had agreed that adequate remuneration should be paid and had inquired what was meant by "a minimum of one guinea a day." It appeared that certain offices paid or guaranteed definite monthly remuneration of £30 or even £40; fifteen or sixteen shillings a day were allowed for travelling expenses and a minimum of a certain amount a day was fixed. It was found, however, that all the examiners received was the guaranteed amount which was held to include travelling and other allowances.

In the course of a discussion it was urged by some members that the number of examinations rarely reached thirty a month, while others spoke of personal experience of thirty in one week. It was held to be necessary to define the position and it was therefore resolved:

> (i) That no financial arrangements be made between the agents and medical examiners, but that all arrangements be made directly between the company and the medical examiner;
>
> (ii) That all travelling expenses be paid, railway and steamer fares to be at first class rates;
>
> (iii) That travelling allowances be paid including hotel and other maintenance expenses;
>
> (iv) That remuneration for services free from all deductions be at the rate of one guinea for each examination with a minimum of ten pounds a week.

Fees for Life Insurance Examinations.

A motion from the South Australian Branch was submitted by Dr. Bronte Smeaton that larger fees than ten shillings and sixpence and one guinea be charged for examinations of proponents for life insurance and reports on the ground that the examination had become much more complicated, time-robbing and intricate than formerly. It was explained that many offices were issuing policies without medical examination at all and that the practice of engaging the services of a special medical referee was common with some of the larger offices. The matter had been considered by the Branches on previous occasions.

Dr. Bronte Smeaton obtained permission to withdraw his motion.

Naval Medical Officers.

DR. R. H. FETHERSTON brought forward a request from the Victorian Branch that the Federal Committee consider the question of the general conditions of service of naval medical officers. A short discussion on the payment of active and deferred pay took place. On the motion of Dr. Fetherston, seconded by Dr. E. Brettingham Moore, it was resolved:

> That the matter of general conditions of service of naval medical officers be referred to a sub-committee of Sir George Syme and Dr. R. H. Fetherston with power to coopt and that the sub-committee submit a report to the next meeting.

Australasian Medical Congress (British Medical Association).

The Honorary Secretary reported that in accordance with the regulations of the Australasian Medical Congress (British Medical Association) the Federal Committee had the task of inviting certain prominent persons to accept the positions of patrons and of vice-presidents of the third session, Sydney, 1929.

He moved that the Governor-General of Australia, the Governor-General of New Zealand, the Governors of the several States of Australia, the Governor of Fiji, the Lieutenant-Governor of Papua and the Chancellor of the University of Sydney be invited to accept the positions of Patrons, and that the past presidents of Congress, the Vice-Presidents of the British Medical Association in Australasia, the Director of Naval Medical Services of the Commonwealth, the Director-General of Army Medical Services of the Commonwealth, the Director-General of Health of the Commonwealth, the Director-General of Army Medical Services of New Zealand and the Director-General of Health of New Zealand be invited to accept the positions of Vice-Presidents.

It was noted that the vice-presidents representative of each Branch of the British Medical Association in Australia and New Zealand would be nominated by the Councils of the respective Branches.

It was further resolved to recommend to the Executive Committee that the Medical Association of South Africa (British Medical Association) be invited to appoint delegates.

Date and Place of Next Meeting.

DR. J. A. DICK moved that the next meeting of the Federal Committee be held at Canberra. The motion was seconded *pro forma* by Dr. R. H. Todd. The proposal did not meet with the approval of the members of the Committee and was lost on the vote. The time and place of the next meeting was left in the hands of the Chairman.

Votes of Thanks.

On the motion of Dr. W. N. Robertson a hearty vote of thanks was accorded to the Council of the Victorian Branch for its hospitality and for having accommodated the Committee during its session. At the suggestion of Dr. J. A. Dick the Committee thanked Sir George Syme for the admirable way in which he had conducted the meeting.

NOMINATIONS AND ELECTIONS.

THE undermentioned has been nominated for election as a member of the New South Wales Branch of the British Medical Association:

Lynch, Richard Bartley, M.B., Ch.M., 1920 (Univ. Sydney), Emmaville.

THE undermentioned have been elected members of the South Australian Branch of the British Medical Association:

Boucant, Hillary Ray Penn, L.R.C.P. (London), M.R.C.S. (England), 1927, Adelaide.

Cotton, James Murray, M.B., B.S., 1926 (Univ. Adelaide), Adelaide.

Davis, Harold Julian, M.B., B.S., 1927 (Univ. Adelaide), Adelaide.

Glastonbury, Kevin, M.B., B.S., 1926 (Univ. Adelaide), Spaulding.

Lawrance, Bruce Ernest, M.B., B.S., 1927 (Univ. Adelaide), Adelaide.

Magarey, Ivan Sandilands, M.B., B.S., 1927 (Univ. Adelaide), Adelaide.

McKenzie, Donald Keith, M.B., B.S., 1927 (Univ. Adelaide), Adelaide.

Trudinger, Malcolm August, M.B., B.S., 1927 (Univ. Adelaide), Adelaide.

von der Borch, Rudolph Hermann, M.B., B.S., 1926 (Univ. Adelaide), Adelaide.

Woolcock, Rosslyn James, M.B., B.S., 1927 (Univ. Adelaide), Adelaide.

Woollard, Herbert Henry, M.C., B.S. (Melbourne), M.D. (Adelaide), 1911, M.B., Ch.B. (Edinburgh), Adelaide.

Medical Societies.

THE MEDICAL BENEVOLENT ASSOCIATION OF NEW SOUTH WALES.

THE following reports of the Honorary Secretary and of the Honorary Treasurer of the Medical Benevolent Association of New South Wales for the year 1927 have been forwarded for publication.

Honorary Secretary's Report.

The Treasurer's report which is made up to December 31, 1927, shows the total income to have been £575, total expenditure £487, leaving a balance of £88 to be carried forward. Costs of administration amounted to £55, while £431 was paid to beneficiaries.

There are now 66 life members, but only 216 annual subscribers. Donations amounted to £115. It is clear that a great many more annual members are wanted. There are 1,600 members of this Branch of the British Medical Association, yet our total membership is less than 300. The Association should appeal to every member of the profession. It partakes of the nature of insurance and yet satisfies our natural charitable instincts. Members may rest assured that every care is taken that the money is properly spent.

THE MEDICAL BENEVOLENT ASSOCIATION OF NEW SOUTH WALES.

Balance Sheet as at December 31, 1927.

LIABILITIES.	£	s.	d.
Capital Account as at December 31, 1926 ..	1,424	9	7
Add Surplus for the Year ended December 31, 1927, as per Income and Expenditure Account	88	15	2
	£1,513	4	9

ASSETS.	£	s.	d.
Cash Accounts—			
Commercial Banking Co.	81	3	4
Government Savings Bank	32	1	5
N.S.W. Government Funded Stock	900	0	0
Commonwealth Govt. Inscribed Stock ..	500	0	0
	£1,513	4	9

Income and Expenditure Account for Year ended December 31, 1927.

	£	s.	d.
To Assistance to Beneficiaries	330	0	0
„ Paid St. Leger Willis Fund	101	15	0
„ Legal Expenses	1	11	6
„ Printing	28	7	6
„ Premiums on War Loan Bond	4	7	6
„ Stamps, Exchange and Petty Cash	20	6	0
„ Bank Charge	0	10	0
„ Cheque Book	0	4	2
„ Refund of Excess on Subscription	0	2	0
„ Surplus for the year added to Capital Account	88	15	2
	£575	18	10

	£	s.	d.
By Donations	115	11	7
„ 216 Annual Subscriptions	226	16	0
„ 16 Life Subscriptions	168	0	0
„ Refund of Premium on War Loan Bond ..	4	1	3
„ Exchange Added	1	0	6
„ Excess on Subscription	0	2	0
„ Interest on Investments	60	7	6
	£575	18	10

RAYMOND A. R. GREEN, R. C. WINN } Honorary Auditors.
2nd February, 1928.

S. H. MACCULLOCH, Chairman.
E. S. LITTLEJOHN, Honorary Treasurer.
9th February, 1928.

The Council appeals confidently for fuller support, knowing full well that such support will be forthcoming, when the objects of the Association become better known.

Honorary Treasurer's Report.

It will be seen from the balance sheet that our income for the year was £575 and our expenditure £487, leaving a credit balance of £88. This seems a very poor return for the efforts of twelve months.

Assistance to beneficiaries absorbed £431 of the expenditure, so that the actual cost of administration amounted to £55, spent almost entirely on printing and stamps.

There were 16 new life members, 34 less than last year, and 216 annual subscribers, an increase of 48.

I regret to have to state that there is still only one benefactor on our list.

It seems that the bump of philanthropy is but poorly developed in the medical profession, as we have only 230 subscribers out of 1,600 members of the British Medical Association in New South Wales.

We owe our thanks to the Northern Districts' Medical Association, the Western Medical Association and the City Medical Association for generous donations and to an anonymous donor of £50.

We also beg to thank the MacCormick Portrait Fund Committee for the donation of their surplus funds.

With regard to the St. Leger Willis Fund, the sum collected by us has, at Mrs. Willis' request, been handed over to her trustees. This sum amounted to £101 15s.

The object I have in view is to pay all expenses out of annual subscriptions and interest and place all life subscriptions and donations to capital account, but this is very far from being possible at present.

NEW SOUTH WALES MEDICAL UNION.

THE thirty-fifth annual report of the New South Wales Medical Union for the year 1927-1928 was issued on March 15, 1928, in the following terms:

The Council has pleasure in submitting to the members the thirty-fifth annual report of the New South Wales Medical Union for the year 1927-1928.

There are 1,204 members; 195 of these are life members. The new members elected number 112. Three hundred and sixteen have paid the second guinea subscription.

A great many cases have come before the Council again this year. Fortunately none have come into court. The legal expenses (£821) have necessarily been heavy. Every endeavour has been made to cut down this item of expenditure. There is a surplus on the year's work of £913.

Actions at law against medical men are now much more common than formerly. It is therefore desirable for every medical man to protect himself as fully as possible. An X ray examination should always be made, if at all practicable, in cases of fracture, dislocation, foreign body

NEW SOUTH WALES MEDICAL UNION, SYDNEY.

Balance Sheet as at February 29, 1928.

LIABILITIES.	£ s. d.	£ s. d.
Capital Account as at March 1, 1927	15,177 8 0	
Add Surplus for year ended February 29, 1928, as per Income and Expenditure Account	913 4 11	
		16,090 12 11
		£16,090 12 11

ASSETS.	£ s. d.	£ s. d.
Cash Accounts—		
Commercial Banking Co. of Sydney, Ltd.	761 1 11	
Government Savings Bank of N.S.W.	628 3 0	
		1,389 4 11
Investments—		
Commonwealth Inscribed Stock, 5½%, 1933	8,300 0 0	
Commonwealth Inscribed Stock, 5¼%, 1941	700 0 0	
N.S.W. Govt. Stock, 3%	300 0 0	
Do. do. 1926, 5½%	2,800 0 0	
Do. do. 1928, 5¼%	1,600 0 0	
Do. do. 1934, 5½%	501 8 0	
First Rural Bank Loan, 1933, 5½%	500 0 0	
		14,701 8 0
		£16,090 12 11

Revenue and Expenditure Account for Year ended February 29, 1928.

	£ s. d.
To Rent (New South Wales Branch of the British Medical Association)	30 0 0
„ Honorarium—Treasurer	200 0 0
„ Honorarium—Secretary	250 0 0
„ Assistant Secretary	200 0 0
„ Legal Expenses	821 16 7
„ Printing and Stationery	27 10 0
„ Stamps, Bank Exchange and Charges	28 10 4
„ Audit and Accountancy Fees	26 5 0
„ Surplus for year, transferred to Capital Account	913 4 11
	£2,497 6 10

	£ s. d.
By Subscriptions	1,591 16 0
„ Entrance Fees	117 12 0
„ Interest Received from Investments	787 18 10
	£2,497 6 10

I have examined the above balance sheet and relative revenue and expenditure account, comparing them with the books, documents and vouchers submitted for my inspection and hereby certify that such balance sheet is, in my opinion, a full and fair one, so drawn up as to exhibit the position of the Union as shown by the books.

38, Martin Place, Sydney.
March 6, 1928.

E. A. TYLER, F.I.A.A., Public Accountant.
E. S. LITTLEJOHN, Treasurer.

et cetera. If the patient or the friends refuse to have one made or if an adequate apparatus be not available, then the responsibility is taken from the medical attendant's shoulders. Such refusal should always be put in writing or made in the presence of reliable witnesses. The Council attaches the highest importance to this and will take any neglect in this direction to account in deciding what assistance to grant.

The second point the Council wishes to impress upon members is the importance of following the directions laid down in Rule 25. This rule requires a member to inform the Secretary at once of any action which may be brought against him. Even if there is merely a threat of an action, the Secretary should be informed.

The Council records with regret the death of Dr. R. B. Monson, Dr. H. L. Harris, Dr. Thomas Fiaschi, Dr. M. L. Kite, Dr. E. P. McDonnell, Dr. E. W. Ferguson, Dr. A. A. O'Hara, Dr. A. J. Brady, Dr. J. F. Barnet, Dr. N. Dowling, Dr W. H. Boazman and Dr. E. H. Binney.

Dr. Fiaschi had been a Trustee since 1893 and Chairman since 1914. Dr. Brady was Treasurer in 1893 and had been a member of the Council ever since. Much of the success of the Union has been due to their cordial and loyal support. The medical profession in New South Wales owes a great deal to these two high-minded gentlemen who gave so much of their time to the affairs of the Union and other medical organizations. Dr. S. H. MacCulloch was elected Chairman in succession to Dr. Fiaschi.

Correspondence.

A NOVEL METHOD OF RESUSCITATION AFTER AN ANÆSTHETIC.

Sir: When three or four in the profession are gathered together off duty, it is never long before the talk will turn on the humorous side of a doctor's routine. That this exists in full measure none would deny, but the columns of The Medical Journal of Australia would as a rule rightly ignore contributions sent to it of this nature. Still, the following incident that occurred at the Torres Strait Hospital caused the staff so much amusement that I venture to submit it; if it cannot be seriously regarded as a means of post-anæsthetic resuscitation, it may at least entertain your readers.

Some months ago an operation for the removal of tuberculous glands of the neck was performed on a coloured boy of fourteen and when it was over he was sent back to the ward, still unconscious after the ether he had had. My own work at the hospital being completed upon the termination of this operation, I was preparing to go home, when I noticed that my bicycle tyres were low. A young Malay convalescent, named Seden, was hanging about the surgery, so I asked him to pump them up for me, telling him that I would have the pump sent to him for that purpose. I then went on with one or two final jobs before leaving.

In the meantime our head sister, seeing Seden doing nothing, told him to relieve her at the bed of the unconscious patient, handing him a fan she was using to keep the boy cool. In due course the pump was brought to Seden who was then alone at the bedside fanning his charge.

When I was ready to go home, I found the bicycle had not been touched and went into the ward to ask the Malay why it was not done. The matron accompanied me. To our intense amusement we found that Seden, in possession of the pump, was under some misapprehension as to what he had to do with it and, probably inspired by the fan, was doing the best he could under the circumstances. Leaning over the unconscious boy he had inserted the rubber connexion as high as he could into the patient's nostril and was in all seriousness solemnly engaged in slowly pumping air therein. At the same time he was evidently rather dubious as to whether he was doing quite the right thing, for on my calling to him, "You —— fool" (one of the few English phrases he well understood the meaning of), he dropped the pump and burst into roars of laughter in which we both joined.

A general hospital is not the place to seek the comic side of life, but events like this add a zest to work performed usually in somewhat pathetic surroundings. I beg to apologize for the triviality of this subject but feel it is worth perpetuating.

Yours, etc.,

G. H. Vernon.

Thursday Island.
April 7, 1928.

THE LIGATURE AFTER SNAKE AND SPIDER BITE.

Sir: Dr. Hamilton Fairley has contributed an interesting letter to the journal in which he calls attention to my suggestion about the use of the ligature in snake and spider bite. Dr. Fairley points out that the ligature is only efficacious in those species of snake in whose venom is found thrombase. He admits that all Australian venomous snakes have thrombase in their venom and as our remarks only concerned Australian snakes, it follows that the ligature is a logical and efficacious mode of treatment after the bite of a venomous Australian snake. Now, as regards spider bite, in going over the evidence again the first thing that has to be admitted is that very little is known about what spider venom contains; but it is certain that the venom contains both a neurotoxin and a hæmolysin, but there is no evidence one way or the other about thrombase. Let us therefore see if there is any *a priori* reason to suppose that it is not present. The ticks, spiders and scorpions are grouped together under the *Arachnida* division of the *Arthropoda* thus:

Arthropoda-Arachnida (*a*) *Acarinæ*, ticks.
(*b*) *Araneidæ*, spiders.
(*c*) *Scorpionidæ*, scorpions.

As regards the ticks I am quite sure that no thrombase is present, because this would be the very last thing that the tick would want to inject, as it has no wish to cause the blood to clot; on the contrary it injects anticoagulin which keeps the blood liquid; just as the leech does, who has a so-called salivary gland at his head end which contains a high concentration of antithrombin. Scorpion venom is said to differ no more from snake venoms than do these from each other and it contains a neurotoxin, but I have found no mention of thrombase.

As regards spiders, I have no evidence that their venom contains thrombase and so we come to a dead end as regards thrombase in ticks, spiders and scorpions; so Dr. Fairley may be right that the ligature will be of no use in spider bite, but there is another aspect of the ligature that may be considered. The amount of poison injected by the spider is very small and if a ligature is applied, say to a finger, the circulation is impeded while the patient is conveyed to the medical man, who can then inject a little cocaine to remove the area into which the venom has been injected and the open wound can then be washed and probably very little poison will be left behind. However, it is well to remember that Kobest found that aqueous extracts of Crimean *Karakurtes* when diluted even in the proportion of 1 : 100,000 had a distinct poisonous effect.

Yours, etc.,

Stewart McKay.

Sydney, April 18, 1928.

POISONING BY TRACHYMEDUSÆ.

Sir: Severe cases of poisoning by jellyfish seem to be of rare occurrence in Australian waters so that a record of the following case may be of interest:

A male, *ætatis* twenty-seven years, was swimming in the sea at Onslow, Western Australia, when he felt a sting on the shoulder and noticed web-like material over same (tentacles of jellyfish). Pain and numbness immediately developed through the shoulder. Slight frothing at mouth

occurred and intense vomiting within five minutes. Pain soon became generalized with cramps in the abdomen. Pain especially across loins and in back of legs and across shoulders.

On examination a wheal was noticed on the top of the right shoulder. The shoulder was considerably swollen as well as scapular region and both areas very cyanotic. The patient was extremely collapsed and was sweating profusely. He was evidently in extreme pain. The eyes were suffused and pupils dilated. There was definite tremor. The extremities were cold and numb. Knee reflexes were exaggerated.

Morphine was given immediately together with stimulants and the patient left the hospital in three days. During his illness he lost ten pounds in weight.

Within a week of twelve months before, during my temporary absence from Onslow, half a dozen cases with similar symptoms occurred, but the cause was not discovered, although at the time the sea was full of small jellyfish. There seems thus to be a seasonal incidence when the bite of these *Trachymedusæ* are bad.

I shall be glad if any of your readers can give me the name of any literature dealing with Australian *Trachymedusæ*.

Yours, etc.,

ARTHUR E. STENNING, M.B. *et* B.S. (Melbourne).

Onslow, Western Australia.
April 4, 1928.

MIND HEALING AND CHRISTIAN SCIENCE.

SIR: May I be allowed to endorse the editorial comment of April 14, 1928, on Mr. Joseph F. Turner's criticism of my reference to Christian Science in the article on mind healing.

Whatever Mary Baker Eddy may have thought of the originality of her ideas is beside the point. Owing to the universality of the psychological process of rationalization any person is a poor judge of his or her own motives and activities. The true perspective can only be reached after impartial research into all accompanying circumstances. That the fundamental tenets of Christian Science do not accord with the results of scientific investigation does not, of course, imply dishonesty in their founder. The ranks of the honest would be decimated if every rival zealot and enthusiast were to be considered a probable charlatan.

Whilst Christian Science helpfully reminds us of the importance of the psychological factor in disease, it is, alas, no panacea for human ills and its incursion into the realm of medicine is to be deprecated. A religion which will not accept or use the findings of science, can hardly be expected to be efficient in healing and must often harm rather than cure. More than a few of our cases have had their symptoms aggravated by the doubtless honest, but none the less ill-advised ministrations of the Christian Science healers.

Yours, etc.,

JOHN BOSTOCK.

Wickham House, Wickham Terrace,
Brisbane.
April 20, 1928.

Post-Graduate Work.

COURSE IN TROPICAL MEDICINE AND TROPICAL HYGIENE AT TOWNSVILLE.

THE DEPARTMENT OF HEALTH AND QUARANTINE SERVICE of the Commonwealth has made arrangements to hold a post-graduate course in tropical medicine and hygiene at the Australian Institute of Tropical Medicine, Townsville, commencing on May 1, 1928. The course will extend over twelve weeks and an additional two weeks will be allowed for examination.

Included among the subjects are tropical medicine and hygiene, protozoology, helminthology, medical entomology, bacteriology, tropical pathology, immunity technique, tropical ophthalmology and demonstrations illustrating various aspects of practical tropical sanitation. The Australian Institute of Tropical Medicine is fully equipped with all facilities for the teaching of these subjects and has available a large amount of tropical pathological material for study as well as an extensive library, embracing the majority of the better known tropical journals, reprints *et cetera*.

Medical graduates attending the course will receive a certificate of attendance and those who sit for examination in theory and practice at the close of the course, will receive a further certificate setting forth the standard attained.

A fee of ten guineas will be charged to cover the cost of the course. Each applicant will be required to provide his own microscope, but all other scientific material will be furnished by the Institute.

It should be pointed out that any applicant, desiring to obtain the diploma in tropical medicine, must (prior to the course at the Australian Institute of Tropical Medicine) attend the prescribed course of one month's duration at the University of Sydney, of Melbourne or of Adelaide. Should the candidate have passed Part I of the course for the diploma in public health in any one of these institutions, it will not be necessary for him to attend a preliminary course.

Townsville is in regular communication with the capital cities of other States three times a week by rail and once a week by steamer. The first saloon, single, steamer fares are as follows:

Melbourne to Townsville	£17	7	6
Sydney to Townsville	£13	2	6
Brisbane to Townsville	£8	5	0

First class railway fares are as follows:

Melbourne to Townsville	£12	9	0
Sydney to Townsville	£10	1	0
Brisbane to Townsville	£5	17	1

Hotel accommodation is available at Townsville at rates varying from £2 2s. to £4 10s. per week. Suitable accommodation at boarding houses or in flats is difficult to obtain. If they desire it, candidates will be supplied on arrival with a list of hotel charges and suitable flats and their rentals, but the authorities at the Institute can accept no responsibility other than that of supplying what information they have available in this matter.

Intending applicants for the course are invited to communicate with either the Director of the Division of Tropical Hygiene, Steamship Buildings, Eagle Street, Brisbane, or the Acting Director of the Institute of Tropical Medicine, Townsville.

Obituary.

DONALD AENEAS DUNLOP MACMASTER.

WE regret to announce the death of Dr. Donald Aeneas Dunlop MacMaster which occurred at Sydney on April 18, 1928.

Proceedings of the Australian Medical Boards.

VICTORIA.

THE undermentioned have been registered under the provisions of Part I of the *Medical Act* 1915, of Victoria, as duly qualified medical practitioners:

Clemons, Jean Wilmore, M.B., B.S., 1926 (Univ. Melbourne), Queen Victoria Hospital, Melbourne.
MacCallum, Peter, M.B., Ch.B., 1914 (Edinburgh), D.P.H., R.C.P. *et* S. (Edinburgh), R.F.P.S. (Glasgow), 1923, the University, Melbourne.
Smith, Henry, M.B., B.S., 1890, M.D., 1894 (Durham), Selborne Road, Kew.

Books Received.

THE TREATMENT OF PULMONARY TUBERCULOSIS, by Dr. Marc Jacquerod. Second English Edition, revised by S. F. Silverbauer, M.D., F.R.C.P. (Edinburgh); 1927. London: Baillière, Tindall and Cox. Foolscap 8vo., pp. 77. Price: 1s. 6d. net.

AN INTRODUCTION TO PRACTICAL BACTERIOLOGY: A GUIDE TO BACTERIOLOGICAL LABORATORY WORK, by T. J. Mackie, M.D., D.P.H., and J. E. McCartney, M.D., D.Sc.; Second Edition; 1928. Edinburgh: E. and S. Livingstone. Crown 8vo., pp. 404. Price: 10s. 6d. net.

Diary for the Month.

MAY 8.—Tasmanian Branch, B.M.A.: Branch.
MAY 8.—New South Wales Branch, B.M.A.: Ethics Committee.
MAY 10.—Victorian Branch, B.M.A.: Council.
MAY 10.—New South Wales Branch, B.M.A.: Clinical Meeting.
MAY 11.—Queensland Branch, B.M.A.: Council.
MAY 15.—Tasmanian Branch, B.M.A.: Council.
MAY 15.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
MAY 16.—Central Northern Medical Association, New South Wales.
MAY 31.—New South Wales Branch, B.M.A.: Branch.
MAY 31.—South Australian Branch, B.M.A.: Branch.
MAY 31.—Northern Districts Medical Association, New South Wales.
MAY 31.—Illawarra Suburbs Medical Association, New South Wales.

Medical Appointments.

Dr. Arthur Joseph Shappere (B.M.A.) has been appointed Government Medical Officer at Tuncurry, New South Wales.

* * * *

Dr. Joseph Bernard Dawson (B.M.A.) and Dr. Alfred William Hill (B.M.A.) have been appointed Members of the Board of Optical Registration, South Australia.

* * * *

Professor John Burton Cleland (B.M.A.) has been appointed a Member of the Fauna and Flora Board of South Australia.

* * * *

Dr. Harry Roy Pomroy (B.M.A.) has been appointed Honorary Clinical Assistant to the Venereal Clinic at the Adelaide Hospital, South Australia.

* * * *

Dr. Harry Wyatt Wunderly (B.M.A.) has been appointed Honorary Assistant Pathologist at the Adelaide Hospital, South Australia.

* * * *

Dr. Allan Dunstan Lamphee (B.M.A.) and Dr. Gilbert Edgar Jose (B.M.A.) have been appointed Honorary Anæsthetists at the Adelaide Hospital, South Australia.

* * * *

Dr. Alan J. Macdonald (B.M.A.) has been appointed District Medical Officer and Public Vaccinator at Mornington, Western Australia.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xviii.

CAIRNS HOSPITALS BOARD: Assistant District Medical Superintendent.
ROYAL AUSTRALIAN AIR FORCE: Medical Officer.
AUSTIN HOSPITAL FOR CHRONIC DISEASES, HEIDELBERG, VICTORIA: Radiologist, Pathologist and Registrar.
MELBOURNE HOSPITAL, VICTORIA: Acting Surgeon to Out-Patients.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Members accepting appointments as medical officers of country hospitals in Queensland are advised to submit a copy of their agreement to the Council before signing. Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Contract Practice Appointments in South Australia. Booleroo Centre Medical Club.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Medical practitioners are requested not to apply for appointments to positions at the Hobart General Hospital, Tasmania, without first having communicated with the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £2 for Australia and £2 5s. abroad *per annum* payable in advance